ILLINOIS
Dental Journal

Volume 10 Number 8

AUGUST, 1941

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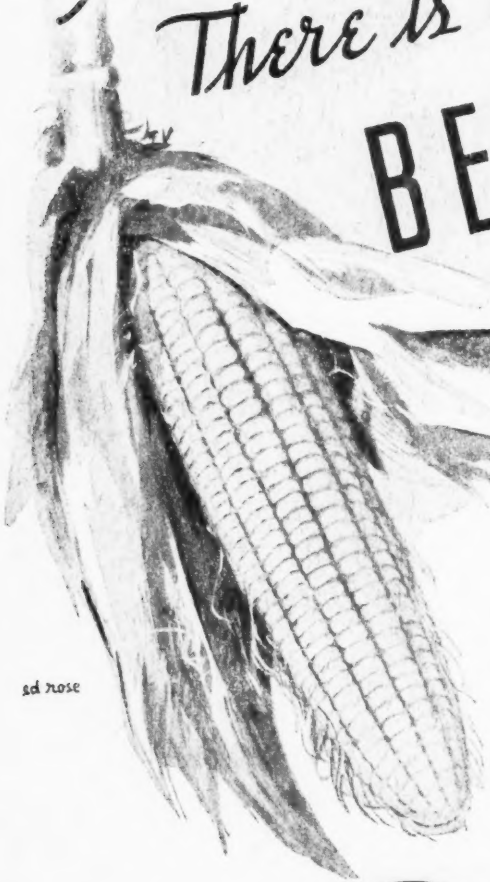

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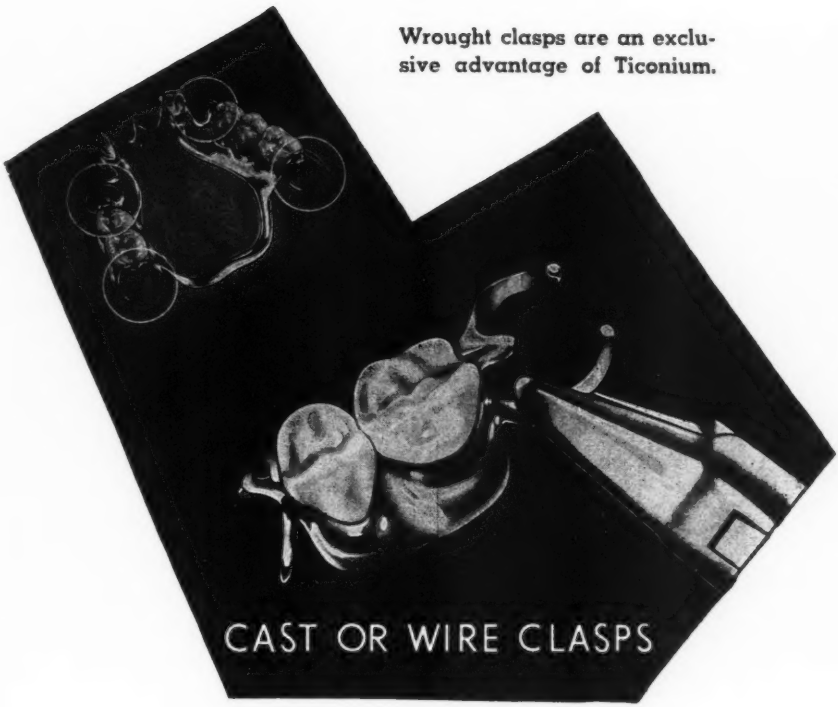

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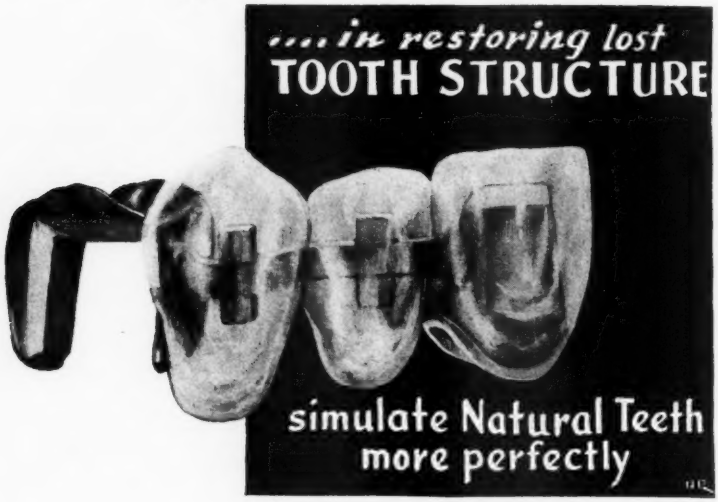

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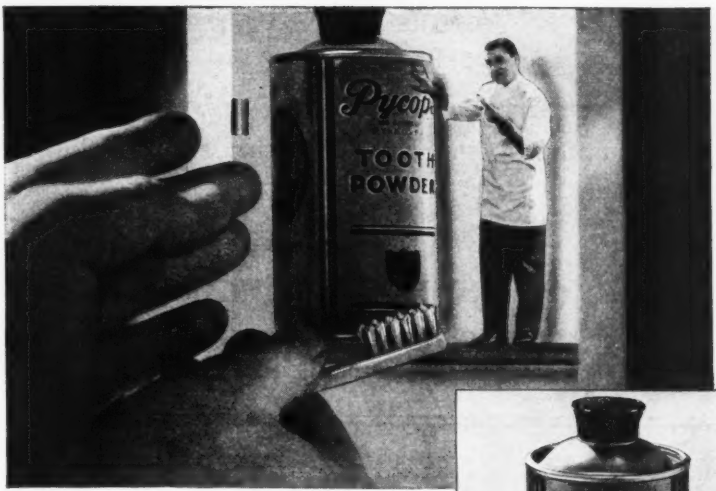

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VOLUME 10 AUGUST, 1941 NUMBER 8

Dental Rehabilitation Problems in Registrants Under Selective Service and Training Act

As the nation settles down to the grim tasks that face it in a time of unlimited emergency, various problems emerge and demand immediate solution. In every field of endeavor that has even a casual relationship to measures of preparedness and national defense, there is a constant search for new methods and an improvisation on old ones in an effort to solve the difficulties that are presented in an economy that is preparing itself for any emergency.

The dental profession has participated actively in such preparations for many months. National and state dental preparedness committees have been working effectively on an inventory of available dental personnel, on examinations of registrants under the Selective Service Act, on the conservation of dental resources to meet a continuing emergency. These programs are now under way and the profession is devoting all of its resources to meeting new problems as they occur.

Dental Defects

One of the greatest problems to face the profession in the emergency has been taking form for many months. After the passage of the Selective Service and Training Act in September 1940, physical examination of thousands of registrants was inaugurated. The results were soon known to every dentist and every newspaper reader in the country. Dental defects were more numerous than they were in similar examinations conducted during the first World War. In May 1941 it was revealed that 380,000 men of the first million called under Selective Service had been rejected because of physical defects. Another 120,000 had been deferred as unfit for military service but had qualified for services such as clerical work. Twenty per cent of these disqualifications, according to Gen. Lewis B. Hershey, deputy director of Selective Service System, were due to dental deficiencies.

It was soon common knowledge that almost half of the men examined were being rejected for physical reasons and that a large part of these disqualifications was due to the high incidence of dental defects. This led, first, to inquiry by both public and profession as to the reasons for the high incidence of dental disease.

Reasons

There is no one, simple explanation. The ten years preceding Selective Service examinations were years of unusually severe financial depression throughout the country. There was widespread un-

employment and a national reduction of income levels. Many families earned little more than was necessary to keep them provided with the bare necessities of life: food, clothing and shelter. The per capita expenditure for dentistry in this country, initially very small, was reduced almost to the vanishing point with the result that large segments of the population received little or no dental attention during this trying decade. In addition, relief dentistry was too frequently focused on adult needs and, whatever its objective, was always hampered by a lack of funds.

During this depression many of those who are now being rejected for dental defects were in those age groups which have a high degree of susceptibility to dental disease. The initial neglect plus a long accumulation of defects resulted in the high incidence revealed by Selective Service examinations.

The findings in these examinations were used by some to point to the complete failure of dental health education programs in schools. Even at first glance the facts in the case do not support such a contention. Dental health education programs have not been widely supported by any group other than the organized profession. Facilities for such programs in state departments of health are rudimentary when compared to those used to combat tuberculosis and syphilis. Federal grants-in-aid to the states for dental purposes have been scanty and have not been in keeping with the importance of dental disease as a factor in national health.

Communities, too, have been reluctant to attack the problem of dental disease. Frequently dental examinations and dental health education programs have been instituted but these have been hampered by a lack of funds to provide the dental care that is revealed. Private and community agencies have not given the assistance that was necessary for a sound attack on dental disease. This is particularly true when an examination is made of funds available for programs against venereal disease, maternal health, tuberculosis and cancer.

Federal Government

Only since 1935 has the federal government officially recognized the importance of dental disease as a factor in national health. Even then this recognition was limited to the assignment of very few officers to problems other than actual dental operations in government institutions. The United States Public Health Service, the chief government agency for such tasks, has only recently started an effective research attack upon dental diseases. Even now, the Public Health Service is taking no steps to increase its personnel to meet new problems arising in the emergency. In fact, the dental personnel of the Public Health Service available for such tasks has recently suffered by reassignment.

One other factor remains to account for the larger incidence of dental defects. When examinations were made in 1917-1918 the country was already at war and manpower was the immediate need of the moment. Dental resources were not as well organized as they are today and it is likely that adherence to dental requirements was not as strict as it is today. At the present time Selective Service examinations are made by dentists who are more highly trained and who interpret the dental requirement more strictly.

But whatever the reason, the fact remains that thousands of young men are kept out of military service because of dental defects. This immediately creates a problem which becomes more and more serious as national manpower becomes depleted by assignment to necessary tasks in the time of emergency. Many of those now disqualified for service by reason of dental defects can be made available for service by proper dental care. Those selectees who are in Class I-B (available for limited military service only) can be placed in Class I-A after they have received proper dental attention. Selectees in Class I-A are

available for immediate military service.

One effort is already being made to cut down the number of disqualifications by reason of dental defects. A program of "prehabilitation" has been announced by the Dental Advisory Committee to Selective Service.[1] This is being carried on in connection with the medical rehabilitation program.

The prehabilitation of registrants depends mainly on education of the registrant to recognize defects that may prevent his entry into military service and on the correction of these defects at the registrant's own expense. At the present time all persons registered under the Selective Service Act are receiving a circular which states the physical requirements and provides advice on how to meet them. The following is an excerpt from this circular[2]:

Making yourself fit for service is probably a very simple procedure. At most it involves only three steps: 1. Learn the minimum requirements of the Selective Service Regulations. 2. Consult your family physician or dentist, one or both, if you discover or suspect that you fall short of what is demanded of you. 3. Follow their advice if arrangements can be made on a mutually satisfactory basis; if not, let them direct you to the nearest clinic, hospital or social service agency best suited to your particular needs.

Here is the relative proportion of defects that have been the principal cause of rejections at the local Selective Service boards and at the Army induction stations:

Defect	Percentage of total rejections	
	Selective Service	Army
Teeth	18.55	19.32
Eyes	10.56	13.25
Cardiovascular system	10.06	6.18
Musculoskeletal defects	8.36	4.90
Mental and nervous	6.24	10.48
Ears	4.45	9.52
Hernia	4.20	5.28
Lungs	3.86	5.00
Venereal	3.49	4.44
Feet	3.07	3.64

Many of these rejections could have been avoided by wise forethought and intelligent action. By rendering yourself fit for service you are preparing yourself to meet the requirements of the examinations. The requirements are listed below, together with the advice considered desirable:

Teeth:—Requirements. An adequate number of serviceable teeth—six biting and six chewing teeth, three pairs of each that are opposite each other when chewing. Fillings, crowns, dummies and fixed and removable bridges make a tooth acceptable.

Advice:—See your dentist, have cavities filled and proper replacements made; have teeth cleaned and clear up oral infection.

The circular then describes the requirements in other physical departments and provides advice on preparations necessary to meet them. As can be seen the program of prehabilitation uses health education in an effort to have the registrant in proper physical condition to meet Class I-A requirements *before* he appears at his local draft board for examination.[3]

Rehabilitation

The importance of the drain on potential manpower caused by the high percentage of disqualifications has been recognized by Dr. Thomas Parran, Surgeon-General of the United States Public Health Service. In a recent address he said[4]:

As a nation what are we to do with this reservoir of manpower unavailable for the armed services? I urge that the government offer or, if necessary, require corrective treatment where it is indicated.

This is not, however, a fundamental approach to developing our maximum manpower. All signs point to a long war ahead. The public health and medical professions should draw the blueprints now for early nationwide action to put all our knowledge to work for the benefit of the nation.

Implicit in such a program is an equal opportunity for health. We Americans want good health to be the heritage of all, on as democratic a basis as the suffrage itself. We need this heritage now for the nation's safety.

[1]For a statement of the entire program see last month's issue: Ill. D. J. 10:260 (July) 1941.

[2]Prehabilitation of Registrants. J.A.M.A. 117:116 (July 12) 1941.

[3]For extended comment on the probable success of such a plan, see last month's issue: Ill. D. J. 10:265 (July) 1941.

[4]Parran, Thomas. The Function of Public Health in Defense. J.A.M.A. 117:186 (July 19) 1941.

We shall need it later if we are to have the fruits of the peace we seek.

After a registrant has appeared before his local draft board or at the induction station and after he has been rejected because of dental deficiencies, a new problem arises because the registrant has received his classification. If he has been placed in Class I-B because of dental defects he is eligible only for limited military service. The attempt to aid Class I-B registrants to enter Class I-A is known as rehabilitation. This consists, so far as dentistry is concerned, of actual dental operations performed on the registrant.

The immediate difficulty in providing this dental service on a wide scale is the cost. It has been estimated that approximately fifty thousand registrants are in need of dental rehabilitation. In the last World War this dental service was performed largely by dentists without charge through an agency known as the Preparedness League. There are many substantial arguments against a repetition of this effort and these arguments have been recognized in the Report of the Commission on Physical Rehabilitation, recently made by that official agency.

In summary the Commission's report proposes: (1). That a statement be made by the examiner to designate whether or not defects of registrant are remediable; that subclassifications be created to indicate whether or not registrant is suffering from defects that are correctable; that a statement be made by registrant as to his attitude toward the correction of these defects.

(2). That amending of regulations permit examination at any time of confidential records of registrant by governor of the state or his official representative.

(3). That registrant be advised of his classification in writing and that registrant be told of the underlying condition which caused that classification and that it is considered remediable; that registrant be advised to have defect corrected by his own physician or dentist or, if he is unable to do that, to have work done by appropriate agency in his area; that the registrant shall be further advised of the time that the board has allowed for correction of the defect, at the expiration of which time the registrant must present himself to the board for reexamination and reclassification.

(4). That state and local rehabilitation committees be created jointly by the Federal Security Agency and the Selective Service System to collaborate with professional, governmental and volunteer groups.

(5). That Congress meet the cost of corrections for those who cannot pay for them themselves by appropriating funds to the Federal Security Agency for this purpose.

The text of the plan follows[5]:

REPORT OF COMMISSION ON PHYSICAL REHABILITATION

The Commission on Physical Rehabilitation is authoritatively informed that the Army will maintain its present high physical standards of eligibility for military service and will not undertake the rehabilitation after induction of men classified by Selective Service and Army induction boards as having remediable physical handicaps. In making the following recommendations, the commission has therefore been restricted to a program of voluntary physical rehabilitation.

In order to provide information concerning the frequency and the nature of remediable defects among men examined for Selective Service it will be necessary to require physicians of Selective Service and Army induction boards to state in every instance whether the physical handicap responsible for classification I B or IV F is remediable in their opinions. Such registrants should be grouped in a special classification and designated as I B-R and IV F-R. Without this information it will be impossible for states and local communities to prepare plans and to estimate the cost of a rehabilitation program.

The diagnoses recorded on the records of registrants classified in groups I B and IV F by physicians of the Selective Service and Army induction boards give little indication of the possibilities for complete or partial correction. There is a mistaken impression that all registrants in class IV F are not correctable.

[5] J.A.M.A. 117:199 (July 19) 1941.

Actually, registrants in I B have handicaps which restrict their availability to limited forms of military duty, yet the physical disability in some is permanent and nonremediable. Registrants in IV F are suffering from major disabilities which render them incapable of performing any military duties, but some of the men in this category could be restored to group I B or even I A by the correction of their physical handicaps.

The special classification as I B-R and IV F-R will act as an incentive to voluntary correction of remediable physical handicaps. A comprehensive program for physical rehabilitation of the young men of the nation is important in order to maintain effective man power for industry as well as for military service. It will also have an influence in retarding the development of disabilities of middle age which are responsible for an unemployable group in every community.

Experiments in voluntary rehabilitation have been proposed for a few local areas by the American Red Cross and several other agencies. A small experiment in a few selected urban and rural communities will not provide a satisfactory yardstick to estimate the cost for the entire country nor can it provide a reliable answer to the problem. The commission is of the opinion that we must immediately lay the groundwork of comprehensive future plans for physical rehabilitation of our man power by accumulating accurate information in every part of the United States concerning the frequency and the nature of remediable physical disabilities and it therefore submits the following recommendation:

1. Form 200, "report of physical examinations," under the Selective Service and form 221, WD-AGO, "report of induction of Selective Service man," should be amended to contain (*a*) a place for the examining physician to state whether or not, in his opinion, the physical defect causing rejection is remediable or correctable; (*b*) the creation of subclassification of I B and IV F (I B-R and IV F-R) to indicate whether or not the registrant is classified as suffering from a remediable or correctable physical defect; (*c*) statements to be signed by the registrant in these subclassifications relative to (1) his willingness to undergo corrective and remedial procedures, (2) permission for release of information pertinent thereto and (3) whether or not he will provide for appropriate treatment out of his own financial resources.

2. (*a*) Subparagraph *c* of paragraph 165 of the Selective Service regulations should be amended to permit the examination at any time of confidential records pertaining to the physical condition of a registrant by the governor of the state or his designated official representative; (*b*) Subdivision *b* of paragraph 338 of the Selective Service regulations should be amended to provide appropriate parts of the report of physical examination, form 200, in duplicate, and arrangements be made whereby one form may be retained temporarily for rehabilitation purposes by State Selective Service headquarters and state rehabilitation boards.

3. The following instructions should be issued by the National Director of Selective Service to all local boards: When a local board has finally placed a registrant in class I B-R or IV F-R, the chairman shall write to the registrant advising him of his classification and of the underlying condition that caused such classification, and shall inform him that the condition is considered remediable by the examining physician. He shall also advise the registrant to have the remediable defect corrected by his own physician or dentist or, if the registrant is unable to bear the necessary costs involved, he may have the work performed by applying to the appropriate agency or hospital in his area. For this purpose the state director of Selective Service shall supply all chairmen of local boards with a list of agencies, hospitals or other institutions located in the neighborhood which are prepared to engage in this rehabilitation work during the period of the national emergency. The chairman of the local board shall further advise the registrant of the time that the board has allowed for the correction of his defect, at the expiration of which time the registrant must present himself to the board for reexamination and reclassification.

4. In all states and local areas rehabilitation committees should be created jointly by the Federal Security Agency and the Selective Service System to collaborate with professional groups and with local governmental and voluntary agencies in the development of local rehabilitation facilities.

5. Only a small proportion of the population can afford to pay or will be willing to pay for corrective measures which may make them available for military or industrial service but which do not as yet interfere with their present civilian occupations. Communities differ greatly in the availability of medical facilities, and some states and many local communities will be unable to provide the remedial measures which may be necessary to correct physical handicaps. Because of widespread shifting of population during and after the national emergency, the responsibility is national as well as local. In order to meet the situation realistically it is recommended that Congress enact legislation to defray the cost. As this is primarily a matter of vital necessity for national defense, the cost should be met directly by federal defense appropriations to the Federal Security Agency, when needed, utilizing fully its available local medical, dental and hospital facilities. Without

federal legislation of this nature, it can be predicted that little progress in voluntary physical rehabilitation is to be expected.

In the opinion of the commission the alternative to such a voluntary program is lower physical standards of eligibility for selective service and compulsory physical rehabilitation after induction into the Army. Action is required along the lines of one or other of these alternatives, for the present standards of physical eligibility have reduced the nation's reservoir of eligible registrants to a number far lower than had been anticipated. —*George Baehr, M.D., Chairman, Arthur W. Allen, M.D., Frederic A. Besley, M.D., Channing Frothingham, M.D., Harry S. Gradle, M.D., M. T. MacEachern, M.D., John T. O'Rourke, D.D.S.*

This plan obviously goes beyond the program of prehabilitation in that it makes provision for those registrants who are unable to pay for correction with their own funds. It also introduces an element of compulsion in that the registrant will have a specified time in which to have his remediable defects corrected, after which he must report back to his board for reexamination and reclassification. No penalty for failure to have defects corrected in the specified time is stated in the proposal of the commission.

The plan also recognizes the necessity of providing funds for the correction of remediable defects. These funds are to be provided through federal legislation and, the commission states, "without federal legislation of this nature, it can be predicted that little progress in voluntary physical rehabilitation is to be expected." The plan does not state through what specific agency of the Federal Security Agency these funds are to be administered, but the United States Public Health Service is the most easily available agency for that purpose. It is possible, however, that facilities of the National Youth Administration, of the Civilian Conservation Corps or of the Social Security System—all under the jurisdiction of the Federal Security Agency—will be utilized for that purpose.

The plan as proposed contains other points of interest. First, it is a voluntary plan in that no mechanism is established to force the draftee to have his defects remedied. It is hoped to achieve a high percentage of rehabilitants merely by making medical and dental care available through the agency of government. The alternative to such a plan, as pointed out in the program, is "compulsory physical rehabilitation after induction into the army." Once the draftee is inducted into the army he becomes subject to its requirements and might thus be forced to undergo the necessary corrections. As long as the draftee remains in civilian life, however, such compulsion could not be exercised. In order to do this, the army would have to alter its present requirements and, the program states, the commission "is authoritatively informed that the army will maintain its present high physical standards of eligibility for military service and will not undertake the rehabilitation after induction of men classified by Selective Service and army induction boards as having remediable physical handicaps."

Second, the funds for the program will be provided by federal legislation. This will enable the necessary safeguards to be written into the law so that needs and methods of giving care can be determined by the local community. In this way the pressure of the emergency and the need for a rehabilitation program will not be used to create the basic framework of a system of practice that is not in the best interests of the public at large.

Third, the plan proposes the creation of local and state rehabilitation committees specifically "to collaborate with professional groups." This will give the professions an equal voice in providing the service which only they are trained and licensed to give.

SUMMARY

The findings in Selective Service examinations reveal the necessity for a program to correct the defects found. The prehabilitation plan to achieve this objective is discussed. The recently announced plan for prehabilitation is presented in detail with comment on its proposals.

The Treatment of Vincent's Infection*

In the following article three different viewpoints on the treatment of Vincent's infection make up a symposium on this common clinical problem. Each author presents the methods that he has found useful together with his comment on handling various types of cases.

I

By WARREN R. SCHRAM, D.D.S., M.S.D.†

In 1683 van Leeuwenhoek examined and described the spirillum and the fusiform bacillus.[1] By 1896 Vincent, a Paris physician, and others had recognized that the same organisms appeared together in a certain throat infection[2] and the disease was given the name of Vincent's angina.

In 1906 Thomas L. Gilmer described a disease of the gums to which he gave the descriptive name of acute ulcerous gingivitis.[3] Some of the early literature has referred to this as Gilmer's disease.[4] He described a treatment for this condition and this is substantially the same as many practitioners now use.

Since it has become known that the organisms present in Vincent's angina are also present in acute ulcerous gingivitis, this latter disease is commonly called Vincent's stomatitis or Vincent's infection.

Organisms

Whether the spirillum and the fusiform bacillus are separate organisms or different phases of the same one, is still a debated question.[5] While it has not been shown, according to the postulates of Koch, that the spirochete of Vincent and fusiform bacillus can, in themselves, produce the typical necrotic lesion of the disease, it has been shown that they are capable of invading living tissue. From both clinical and experimental considerations, it seems that the constant presence of these organisms in Vincent's infection must be regarded as significant. Yet the typical lesion seems to be produced by a mixture of organisms in tissue of low vitality.

Lesions containing Vincent's organisms have been produced in experimental animals by inoculating them with the combined bacteria recovered from the human lesion. In making this transfer it was found necessary to render the animal deficient in vitamins, or to traumatize or otherwise injure the tissue into which the inoculation was made. It was further found that pure cultures of one, or even two, of the organisms did not produce the typical lesion. Rosebury and Foley made a series of animal inoculation experiments. In respect to this work they state: "The pure cultivation of these organisms is technically difficult. While pure cultures are obviously the most desirable means of producing infection in animals for experimental purposes, exudate from human lesions serves as a satisfactory substitute."[6]

In the practical consideration of the diagnosis and treatment of the disease, it has been repeatedly shown that the organisms of Vincent are present in many mouths in which the acute clinical symptoms of the disease are absent. It is, therefore, wise to make the diagnosis clinically and to substantiate it with bacteriologic findings.

Acute Manifestations

The acute manifestations of this dis-

*These three papers were presented as a symposium at the 77th Annual Meeting of the Illinois State Dental Society, May 13, 1941, Peoria.

†From the Oral Surgery Department of Northwestern University Dental School.

[1] Zinsser, H., and Bayne-Jones, Stanhope. A Textbook of Bacteriology. Eighth Edition. New York: Appleton Century Company. Pp. 5-6.

[2] Vincent, H. *Ann. de l'Inst. Pasteur.* 10:488, 1896 and *Bull. et Mem. Soc. Med. d'Hop. de Par.*, 15:244, 1898.

[3] Gilmer, Thomas L. Acute Ulcerous Gingivitis. D Digest, 12:701, 1906.

[4] Blair, Vilray Papin. Master Surgeons of America, Thomas L. Gilmer. Surg., Gynec. & Obst. 55:670-672, 1932.

[5] Zinsser, H., and Bayne-Jones, Stanhope. Op. Cit. P. 707.

[6] Rosebury, T., and Foley, G. Experimental Vincent's Infection. J.A.D.A. 26:1802, 1939.

ease seem to be initiated in two ways. The organisms of Vincent, present in the mouth as saprophytes may, under favorable conditions, become more active and produce an acute condition; or, the infection may be transmitted from one person to another. Epidemics which have occurred in army barracks leave no doubt as to the contagious nature of the disease.[7]

A description of the disease may be taken from Blair and Ivy.

> The gums are inflamed, painful, and bleed easily. The gum margins are thickened and drawn away from contact with the teeth. The edges of the gum are covered with a grayish white membrane, which when removed leaves a raw bleeding surface. There is progressive destruction of the marginal gum tissue, especially of the interdental septum, the alveolar process itself being eventually attacked. The teeth are tender to the slightest percussion and become loosened, being lost as the bone around them is destroyed. The breath has a characteristic foul odor, and there is a marked increase in the flow of saliva. The disease is not always limited to the gingivae, but may be found on various parts of the oral mucous membrane, including the cheek, the hard and soft palate, and the tonsils. The ulcers are covered with a grayish pseudomembrane due to necrosis of the superficial layers of the mucosa. The patient complains of great pain, headache, nausea, and there is generally a rise in temperature. The submaxillary lymph nodes are almost invariably swollen and tender.
>
> Stained smears made from the lesions show microscopically a great preponderance of the fusiform bacilli and spirochetes.[8]

In the treatment of this disease it should be borne in mind that the organisms which are the probable cause are anaërobes and that they are partly saprophytic in character. The logical treatment, then, is to expose them to oxygen, and eliminate as rapidly as possible the damaged and necrotic tissue upon which they thrive. Accordingly, caustic drugs seem contraindicated since their corrosive action tends to devitalize and injure tissue thus providing culture media for the organisms. The dyes are not objectionable from this standpoint; they penetrate and may be of value in the treatment of certain cases. The mercurial and arsenical drugs, directed at the spirillum, are also used. Arsphenamine is given intravenously or applied directly to the lesion. It is often used in a glycerin base. In respect to the use of the arsenicals intravenously Field makes the following comment.

Arsenicals

> As the matter now stands it appears that the injection of arsenicals in lesions not accessible to local treatment may be advised provided it is not relied on to the neglect of other measures. With accessible lesions the hazard of toxicity is not warranted unless the lesion is exceptionally severe and invasive.[9]

The treatment which we have found to be satisfactory for the usual case of Vincent's infection consists in the cautious removal of sloughing tissue and the subsequent exposure of the organisms to oxygen; rigid mouth hygiene and corrective dentistry are instituted as soon as possible following the initial treatment. It should be emphasized here that surgery in the presence of acute Vincent's infection is contraindicated. Deaths have been reported following such procedure.

Of the oxygen liberating drugs, potassium permanganate is objectionable because of its staining property and sodium perborate has been shown to break down in the mouth to form a caustic chemical which may be destructive to tissue.[10] Because of its detergent action and ability to liberate oxygen generously on contact with tissue, hydrogen peroxide is an effective drug for this purpose. It should be brought into intimate and frequent contact with the lesion.

At the first treatment of an acute condition, large formations of tartar may be removed when this can be accomplished without injury to underlying tissue. Care must be exercised not to spread the infection. The teeth and gums are cleansed

[7] Padgett, Earl Calvin. Surgical Diseases of the Mouth and Jaws. Philadelphia: W. B. Saunders Company, 1938. Pp. 243-244.

[8] Blair, Vilray Papin, and Ivy, Robert Henry. Essentials of Oral Surgery. St. Louis: C. V. Mosby Company, 1923. P. 196.

[9] Field, Henry, Jr. The Therapy of Fusospirochetosis (Vincent's Disease), J.A.M.A. 114:1073 (March) 1940.

[10] Sodium Perborate; Limitations of Its Use. J.A.D.A. 22:1761, 1935.

as thoroughly as possible by use of cotton sponges dipped in 3 per cent hydrogen peroxide. These treatments should be given daily and the patient should be instructed to use a 1½ per cent solution of hydrogen peroxide as a mouth wash several times between treatments. As the acute symptoms subside the teeth should be scaled and thorough mouth hygiene instituted. It is emphasized that this should be done as early as possible, usually two or three days after the first treatment. All areas of inflammation about the teeth should be eliminated. Conditions such as irritating restorations, gum flaps over third molars, and pyorrhea pockets should be corrected.

Prolonged Treatment

To delay prophylactic treatment until a negative smear is obtained from the lesion is neither necessary nor advisable. It is not possible in many cases to eliminate, through medication alone, all organisms of Vincent's infection from mouths in which unhealthy gum conditions are present. The supposition that this is possible has lead, in certain instances, to prolonged medical treatment. In such cases, particularly if caustic drugs (and this term includes sodium perborate) have been used, the destruction caused by the drug may overtake that caused by the disease. That this is true is shown by the fact that many of these patients recover rapidly when medication is withdrawn.

Uncomplicated Vincent's infection is usually brought under control quickly by proper treatment. Cases which do not show definite improvement after the first or second treatment should be looked upon with suspicion. The organisms of Vincent and the typical lesions are often present in tissues adversely affected by other diseases.

Vitamin deficiency, certain leukemias, anemia, agranulocytosis, and diabetes are all systemic conditions which may alter the tissues of the mouth and make them more susceptible to invasion by the Vincent organisms. Syphilis, cancer, and tuberculosis may produce necrotic lesions of the gums. When these areas are secondarily invaded by the Vincent organisms, this disease is superimposed on another and costly errors in diagnosis may be made. Accordingly, when dealing with a condition which is in any way atypical of Vincent's infection, or one which does not yield readily to treatment, steps should be taken to confirm or rule out the presence of other causal factors. In these cases, blood chemistry, serology, urinalysis, vitamin determination, and even biopsies may be useful in making the diagnosis.

When dealing with these obscure conditions, it is often advisable to refer the patient to a physician for diagnosis, and it is always advisable to refer the patient to a physician for the treatment of a systemic disease. However, it is most important that the dentist continue the local treatment.

Summary

A summary may serve to emphasize those factors considered most important in the diagnosis and treatment of this disease: (1) the diagnosis should be made clinically and substantiated by bacteriologic findings; (2) caustic drugs should not be used because of their tendency to destroy tissue, thereby furnishing a culture media for the Vincent organisms; (3) hydrogen peroxide, because of its detergent action and oxygen liberating property, is considered the most satisfactory drug to use; (4) this drug should be brought into intimate and frequent contact with the tissue; (5) oral prophylaxis should be instituted as soon as possible following the initial treatment, usually within two or three days; (6) it is neither necessary nor advisable to delay this treatment until the bacteriologic findings are negative; (7) all atypical cases, and those which do not yield readily to treatment, should be looked upon with suspicion; (8) necessary laboratory tests and consultation should be used to determine the underlying cause when Vincent's infection is a secondary disease.—*311 East Chicago Avenue, Chicago.*

II

By ROBERT G. KESEL, D.D.S.

The rational and satisfactory treatment of any disease must be based upon a correct diagnosis of the existing conditions. A number of procedures have been developed for the treatment of Vincent's infection and most of them work efficiently when a true Vincent's infection exists. But when this infection is associated with, or superimposed upon some other disorder, the usual treatment may not be effective. It is this author's opinion that Vincent's infection occurs in an acute form and does not exist by itself in a chronic state. While microscopic examination of smears made from chronically inflamed gingival areas may reveal many microorganisms of the types associated with Vincent's infection, the inflammation is probably not due primarily to the microorganisms but is the result of some other irritation or condition. The microorganisms are present in abundance because of a favorable environment and attempts to eradicate the microorganisms without correcting the environment will not satisfactorily eliminate the inflammation.

Typical Cases

A typical case of Vincent's infection has a rapid onset and is accompanied by considerable discomfort. The patient suddenly becomes aware of a painful condition in the gums and usually can cite definitely a recent time at which the discomfort was first noted.

The gingivae are inflamed either locally or, in extensive cases, generally. The crests of the involved gingivae show ulcerated areas which are covered with gray necrotic membranes. There is a typical fetid odor to the breath. Salivation is increased. As a rule, the lesions first appear on the gingivae in areas where there has been a lowering of the tissue resistance from some local irritating factors such as calculus, poorly contoured dental restorations, or improper contact of the teeth. Bacteriologic smears made from the ulcerating areas will reveal a preponderance of the fusiform bacillus and the Vincent's spirillum. Very few organisms of other morphological types will be seen in the smears. The patient will probably have a slight elevation of temperature and will complain of general malaise, loss of appetite, and headache. Questioning the patient will often reveal that he has recently suffered from a cold, overwork, worry, or some condition which has lowered his physical resistance.

Treatment

This type of disturbance yields quite rapidly to a number of different treatments. If recovery is not rapid when an accepted treatment is applied there are, in all probability, other conditions associated with the gingivitis and these must be sought for and treated before the Vincent's infection can be controlled satisfactorily. Some of these conditions are blood dyscrasias, such as anemia, leukemia or agranulocytosis; gingivitis, resulting from the use of the salts of heavy metals such as bismuth compounds in treatment of syphilis, diabetes, dietary and endocrine deficiencies, and perhaps certain sub-clinical conditions which are, with present tests and technics, difficult, if not impossible, to detect. If three or four well-directed treatments do not produce a marked improvement or if, after the acute symptoms have subsided and the local irritating factors have been removed, an inflammation of the gingival tissue persists, careful attention should be given to the possibility of an association with one of the conditions just mentioned. Certainly a blood count should be obtained and the diet of the individual should be carefully checked, particularly for its vitamin C and B- complex content. The continued use of antiseptic or oxygen liberating agents to eliminate the inflammation in these cases will not be successful because the underlying

cause is not infection. It is more important to examine and improve the patient's physical status than it is to apply remedial agents only to the gum tissue.

The treatment employed at the University clinic for typical Vincent's infection consists of two phases, a mechanical or cleasing treatment and a medicinal treatment. At the first visit the mouth, particularly the interproximal areas and the gingival crevices, is thoroughly sprayed or irrigated with a warm iodo-saline solution. This solution contains ½ per cent tincture of iodine in physiological salt solution. The iodine is used for its stimulating as well as its antiseptic properties; the solution is used at a temperature of about 120° F. This part of the treatment will remove mechanically, by the force of the spray, the debris that has accumulated about the teeth and in particular, will flush off the necrotic membranes from the ulcerating surfaces. It may be necessary to remove some of the more tenacious membranes by wiping with a cotton applicator or a gauze sponge saturated with the solution.

Medicinal Treatment

Following the cleansing of the mouth with the iodo-saline spray, hydrogen peroxide in the full strength, 3 per cent, is applied to the affected gingival tissues by the means of gauze sponges saturated with this agent. These sponges are used to scrub the teeth and involved soft tissue gently. An attempt is made to work the solution into the embrasures and gingival crevices. Gross deposits of calculus may be removed at this sitting provided that the soft tissues are not traumatized by this procedure. The scaling operation should not be so extensive that hemorrhage is produced. The affected areas are then painted with compound tincture of benzoin which serves, more or less, as a protective and a stimulant to encourage healing. A saline cathartic, usually citrate of magnesia, is prescribed and the patient is told to rinse his mouth with 3 per cent hydrogen peroxide which is diluted at the time of use with an equal volume of warm water. The patient is instructed to rinse his mouth vigorously for several minutes with this solution every four hours. He is requested to refrain from smoking and to avoid other possible forms of oral irritation, such as alcoholic beverages or hot, highly seasoned food. A liquid diet containing plenty of vitamin C is advised. The patient is seen again twenty-four hours later and the oral condition is noted. Some improvement should be evident. The same treatment is performed at this sitting as was given during the first visit. The patient is asked to return again in twenty-four hours. At this third sitting the acute symptoms should have subsided or be reduced materially. As soon as the acute inflammation has disappeared, the teeth should be carefully cleaned and all of the factors which tend to produce a local irritation of the gingival tissues should be relieved. The operculi over partially erupted third molars should be removed or the third molars extracted. Weak or improper contacts and overhanging margins of dental restorations should be corrected. Irritating margins of gingival cavities should be corrected and all calculus should be removed carefully. The inflammation in the tissues adjacent to these areas of irritation will not clear up until these measures have been taken.

Final Stage

The patient is kept on an oxygen-liberating mouth rinse, such as hydrogen peroxide or sodium perborate, until the gingival tissues have returned to normal. He is given careful instructions on how to brush the teeth. If the inflammation does not respond to such treatment, the diagnosis should be reconsidered. It is not believed that a change to another drug or a search for a new technic will procure the desired result. Instead the dentist will do well to consider the causes of chronic gingivitis and, perhaps, institute treatment in that direction.—*808 South Wood Street, Chicago.*

III

JOSEPH G. KOSTRUBALA, M.D., D.D.S.

It is generally agreed that Vincent's infection is caused by a symbiosis of an anaërobic bacillus and a spirillum which produce the well-known changes observed in this particular type of stomatitis. It is also an accepted fact that Vincent's infection is more frequent in individuals whose resistance is low and whose oral hygiene is poor. Accepting these statements as true, it becomes evident that any form of medication associated with corrective measures for increasing the body's resistance and for improving the condition of the mouth will necessarily bring about desirable results. It is hardly necessary to argue the merits of this or that medication. Good results will be obtained with salt water as well as with a highly-praised oxidizing agent if the stomatitis is superficial and the patient responds to general corrective measures.

Generalized Involvement

This discussion will be limited to stomatitis which is definitely associated with signs and symptoms indicating generalized involvement. Vincent's infection may be complicated or followed by infections of deeper structures which cannot be reached readily by topical agents. Such infections are characterized by chronicity and reluctance on the part of the tissues to respond to local and general treatment. In such cases, the administration of arsenicals has been found to be beneficial. One views with alarm the accumulated literature condemning the use of spirocheticidal agents in the treatment of Vincent's infection and yet judicial and timely administration of an arsenical may play a very important role in the prevention of complications of a relatively simple case of stomatitis. A review of the literature on this subject reveals that heavy metals receive an amount of criticism equal to that given the arsenicals. This fact certainly can mean only one thing and that is a misunderstanding of the action of heavy metals on the spirochete. No claim was ever made that a heavy metal has any spirocheticidal effect and, without going into the matter any further, heavy metals have no place in the early treatment of Vincent's infection. On the other hand, the spirocheticidal property of neoarsphenamines is unquestionable. Cellulitis, deep infections, osteomyelitis, and lung abscesses were found to contain Vincent's organisms and were treated successfully by the intravenous route with arsphenamines. Claims have been made that it is impossible to attain a high enough concentration of an arsenical in the blood to produce beneficial effect. This certainly is not true for, in the beginning of an infection, exceedingly small concentrations are needed to abort an infective process.

Administration

Perhaps the reasons for the existing aversion to the use of intravenous medication lie in the necessity of becoming proficient in the technic of administration and in the possibility of existing dangers resulting from toxic reactions that may follow. As in the treatment of any disease, one must be well acquainted with the agents used and with the technic. One must also know the indications and the contraindications of the drugs used. That is expected of any one undertaking the task of treating human ills. It is useless to try to discuss the technic of administration here. This must be learned by actually seeing it done and then doing it a few times under immediate supervision. Neoarsphenamine in .3 gm. doses is used most frequently. Mapharsen in 0.03 gm. is easier to prepare and promises to be less toxic than the neoarsphenamines. Both come in powder form in sealed glass ampules and must be dissolved in sterile distilled water before administration. It is most important to know the contraindications

to the use of arsphenamines. A careful history should be obtained leading to information of previous treatment with any arsenicals. A patient who has previously received antisyphilitic treatment may become sensitized to the drug and may react violently to additional arsenical therapy. In such cases a series of treatments of bismuth in oil, given intramuscularly, minimizes the danger. Some individuals are extremely sensitive to arsenic in any form and it is best to make an inquiry before any form is administered. It is obvious that in such sensitive cases this form of treatment is strongly contraindicated.

A blood Wassermann test should be performed in each case. Should it be found positive, arsenicals are to be avoided for the time being. In addition, a physical examination with special reference to the vital organs should be made. Arsphenamines are toxic to the liver, kidneys, and to the heart. In the presence of any disease of these organs arsphenamines must be withheld. The physical examination should also include the examination of the ears and eyes.

Precautionary Measures

From the foregoing it would appear that this treatment of Vincent's infection is attended by considerable precautionary measures. This fact would give rise to a natural tendency to avoid this form of therapy. In spite of this, intravenous administration of arsenicals constitutes an important adjunct in the management of obstinate cases of Vincent's infection and is definitely indicated in the complications which are mentioned above.

Many infections of oral origin involving the deeper structures are known to be caused by the streptococci and staphylococci. Streptococcic infections are characterized by a fulminating short course associated with marked toxicity, poor leukocyte reaction and a rather sharp elevation of temperature. Pus formation is usually not observed at first. Staphylococcic infections, on the other hand, run a longer course with less toxic symptoms and with marked leukocyte reaction. The temperature may or may not be greatly elevated. Staphylococcic infections usually terminate in an abscess formation which when evacuated constitutes a cure. Frequently both organisms are involved and complicate the clinical picture considerably. Either the staphylococcic, streptococcic or the mixed type of infections may be further complicated by the secondary invasion of the Vincent's organisms.

Cocci Infections

Infections caused by the cocci usually run a more or less typical and short course, but when complicated by the Vincent's organisms chronicity becomes the most troublesome factor. After recovery from the acute phase of the infection, usually caused by the cocci, the patient returns to a more or less normal existence with the exception that, swelling, trismus, some pain and tenderness remain. In incised and drained cases the sinuses persist for weeks or even months. Temperature usually remains normal with slight, irregular elevation at irregular intervals of time. The leukocyte count usually is found to be normal or may be elevated at times. Therapeutic measures usually found of great value in the treatment of coccic infections do not alter the course favorably. The diagnosis of chronic infection is made and the patient is given countless vitamins, tonics and dressing changes. He is told that it will take a long time and that he must return regularly for treatments. He becomes resigned to his fate and at least for a time follows the instructions given him. In such case it is negligence to fail to consider the possibility of a complicating Vincent's infection. Certainly topical application is of no avail. Systemic attack by means of spirocheticidal agents should be made. In these chronic cases administration of a heavy metal has been found to be beneficial as a means of pre-

paring the patient for the arsenical. At least ten doses of 1 c.c. each of bismuth in oil once or twice a week should be administered intramuscularly before a course of arsenicals is contemplated. Heavy metals seem to have a property of breaking down granulomatous formations and frequently marked improvement is observed after a few doses of bismuth. To illustrate the indications for antisyphilitic treatment in Vincent's infection, the following case history is presented.

Case History

A white, well-nourished, well-developed male, age 45, was referred to our service by Dr. A. W. History revealed that about six months ago the patient had received treatment for Vincent's infection by topical application of oxidizing agents and prophylactic scaling of the teeth. According to the patient's story his condition improved markedly. Two weeks later he had his lower right second and third molars removed. On the second postoperative day he noticed a swelling of the face on the right side, associated with some trismus and pain. The treatment at that time consisted of hot fomentations and some pills which were given to him to control the pain. The patient's condition became worse progressively and in about four days he was subjected to incision which produced some pus. He improved somewhat but trismus, pain, and swelling persisted.

From time to time his condition became worse and then he was treated with hot applications. About one month after the first incision his swelling became alarming. Roentgenograms were made but evidently revealed no important findings. An external incision in the submaxillary region was made and was productive of a slight amount of pus. He improved sufficiently to go about his tasks although there remained some swelling, trismus, and persistent intermittent drainage.

On admission, the patient was found to have a swelling of the submaxillary region which was indurated but not markedly tender. A small opening of a sinus was sealed with a dry scab. The patient was able to open the mouth sufficiently to admit the index finger. The oral mucosa and teeth were in a relatively good condition. No glands were palpable in the neck. Examination of the heart and lungs revealed no gross abnormalities. The blood pressure was 144 systolic and 90 diastolic. Temperature on admission was 99.2°. The Wassermann and Kahn tests were negative. The urine was acid in reaction with no albumin and no sugar present. Blood examination gave the following findings: hemoglobin 90 per cent; red blood corpuscles, 4,750,000; white blood corpuscles, 10,050 with 76 per cent polymorphs, 22 per cent lymphocytes, and 2 per cent eosinophils. Under aseptic condition pus cultures were obtained which were returned with a report of no growth. Smears of pus showed the usual picture of leukocytes, debris, and organisms which resembled rods and few spirilla.

Roentgenograms

Roentgenograms of the mandible revealed some rarefication near the angle. The patient was placed on bismuth in oil given intramuscularly twice weekly. No other treatment was given. At the end of one week the patient showed improvement in that his pain and trismus became less troublesome. After five weeks of this treatment he was given three doses of arsphenamine in 0.3 gm. doses one week apart. No more specific treatment was found necessary. The swelling and pain gradually decreased. Drainage disappeared in three weeks after the initial dose of bismuth was given. Of the remaining symptoms, trismus is the most persistent but at this time it is markedly improved.

Arsenicals Valuable

This case illustrates a number of pertinent facts. The first is the inadvisability of any operative procedures in the presence of Vincent's infection; the second, the necessity of carrying out all possible diagnostic tests; finally, the efficacy of antisyphilitic treatment in an obstinate case of a Vincent's infection involving the deeper structures. Notwithstanding the difficulties and the undesired reactions which may be encountered while administering either the heavy metals or the arsenicals, these agents have been found to be of value in overcoming infections when other means have failed. It is advisable for anyone undertaking the treatment of Vincent's infection in all its phases to acquaint himself with the properties and technic of administration of the antisyphilitic drugs.—*55 East Washington Street, Chicago.*

So-Called "Intra-Follicular Caries"

By William G. Skillen, D.D.S.*

In a recent dental publication,[1] there appeared a short, illustrated discussion of so-called "intra-follicular caries." By this is meant caries of dentin underneath an apparently intact enamel cap in a tooth still entirely embedded in the jaw. In view of the fact that identification of this phenomenon was based entirely on roentgenographic findings and the excavation of a soft material from the dentin cavity, and in view of the absence of any histological evidence, it is possible that such conditions are not due to caries at all. In support of this statement the following case, which was discovered almost coincidentally with the above report and which from the roentgenographic standpoint *(Figure 1)* seems to be similar to those already described, is presented and may offer a more reasonable explanation of these occurrences.

Figure 1.

The third molar was completely embedded with no break in the overlying tissue. The roentgenogram shows an apparently intact enamel cap, underneath which exists a radiolucent area in the dentin in the proximity of the distal cusp. Following extraction, a close examination and exploration with a fine probe revealed no break in the enamel of the tooth.

Histological Finding

Subsequent histological examination showed that the radiolucent area was

Figure 2: Mesio-distal view of tooth. C, radiolucent area as shown in roentgenogram, filled with connective tissue; D, wall of dentin separating former from pulp, P; L, lamella in enamel. Original enamel surface outlined.

definitely not due to caries but was the result of a resorption process affecting the dentin. This resorption had definitely taken place from the exterior; the cavity so formed becoming filled with connective tissue *(Figure 2, C)*. Without histological examination, such a mass of tissue, when scooped out, might easily be mistaken for soft carious material. This operation would have been accompanied by pain and bleeding in this particular instance, a result which the previous commentators do not mention having noticed.

No connection could be found to exist between this proliferated connective tissue and the pulp, the two being separated by a layer of dentin *(Figures 2, D and 3, D)* of varying thickness. The pulp *(Figures 2, P and 3, P)* was normal in every way with active odontoblastic action going on which, by the production of new dentin *(Figure 3, O)*, apparently was preserving the dentin layer over the pulp. However, no osteoclasts could be discovered anywhere on the dentin surface, only resorption lacunae being present *(Figure 3, R)*. Whether this means that the resorption process had ceased

*Department of Histology, Northwestern University Dental School.

[1] D. Items of Interest. 63:184 (February) 1941.

Figure 3: High magnification of D, figure 2. C, proliferated connective tissue; R, resorption lacunae on dentin surface; O, odontoblasts and new dentin on pulp, P, side.

temporarily or permanently, that the adjacent tissue itself, or mononucleated cells not recognizable as giant cells, were carrying on the action, is a question.

The proliferated connective tissue, having a rather delicate fibrillar structure, was also entirely normal in appearance. *(Figures 3, C and 4).* Only a few scattered mast and mononuclear cells could be discerned. No inflammatory condition could be seen in this area. The remains of the dento-enamel junction may be seen. *(Figures 2, E and 4, E.)* The question arises as to how this resorption, and the filling-in of the cavity so formed by connective tissue, came about through macroscopically intact enamel.

Answer

Figures 2, L and 5, seem to afford an answer. Here is shown what obviously is a lamella passing through the enamel. The organic remains of the latter may be seen in *Figure 5, E.* A resorption of the dentin at the dento-enamel junction (R) has begun, but again no osteoclasts are observable. There is some indication that resorption of the enamel along the surface of the lamella had been in progress. *(Figure 5, X).* One or two osteoclasts are present in this location. It well may be that the larger destruction on the distal had its beginning in a manner similar to this. This lamella is very limited in size *(.1 mm.),* and presumably occupied a pit of small dimensions on the occlusal surface of the tooth.

Figure 5: Lamella indicated in figure 2. E, enamel remains showing osteoclasts and resorption lacunae at X; R, resorption of dentin at dento-enamel junction.

Figure 4: The proliferated connective tissue. E, old dento-enamel junction.

The initial factor of this resorption and tissue proliferation, is, of course, hidden. It might be suspected, as is usually the case, that a certain degree of inflammation had existed in the over-

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Filling Materials for Deciduous Teeth*

By Corvin Stine, D.D.S.

The paramount reason for filling a tooth is to restore its correct anatomical form so that it can continue its function as an integral part of the chewing mechanism. The preservation of the vitality of the pulp and the prevention of infection are also important but they may be considered as secondary.

Each mouth presents its individual problems and each cavity is a case for individual consideration and thought before a successful filling can be placed. Time may deal unkindly with some attempts but it will also develop that ability to select the right material so that the tooth may be restored in the best manner possible under the existing conditions.

Selection

The selection of a filling material for the restoration of the teeth of children is influenced by many factors. In addition to requiring an exacting operating technic, the problem of being able to institute the technic is often a factor in the selection of the material.

Whatever material is selected, it should be remembered that pulp protection should be employed. In the teeth of the child the pulp chamber is large and thus is nearer the external surface. The dentin is not as thick, the dentinal tubules are larger in diameter and the dentin is more permeable. For this reason, when the dentin becomes involved the decay is more progressive and advances much more rapidly than in the adult. The dentin should be sterilized, the tubules sealed with a cavity lining varnish and a cement base inserted. Wherever there is any question of placing a cement base for protection, a safe rule is to decide in favor of doing so.

The peculiar anatomy of the deciduous tooth is a contributing factor in the selection of a filling material. Among the considerations thus involved are the large pulp chambers with their extruding horns, the short, frail enamel rods, the permeable dentin, the lack of root development in a very young child, root resorption in the older child and the extreme senstivity of the pulp to external stimuli.

In the permanent teeth accessibility, ability to keep the tooth dry, extent of eruption, size of the pulp chamber, amount of root development, caries susceptibility, opportunity of easier access during a later period when adjacent teeth are missing, all assist in determining the type of filling to be employed.

Factors

The expected period of retention of a particular deciduous tooth, the absence or loss of teeth and the general physical condition of the child are additional factors that require attention. There can be no fixed rule on when to use this particular material or when to use that particular material, but each cavity presents a problem of its own and must be treated as an individual case.

The materials to be considered as filling materials for children's teeth are base plate gutta percha, zinc cement, copper cement, silicate cement, kryptex cement, copper amalgam and silver amalgam, gold and silver inlays, and gold foil fillings.

Gutta percha:—Base plate gutta percha is used as a temporary filling for packing gingival tissue away from the gingival seat of cavities and for gaining separation where caries has allowed the teeth to drift toward each other. It may be used as a filling material for a very limited period of time where the stresses

*Presented before the 58th Annual Homecoming Clinic of the Chicago College of Dental Surgery, Dental School of Loyola University, Chicago, April 7, 1941.

of mastication are not exerted upon it.

Zinc cement:—Zinc cement is used chiefly as a temporary filling material. In mouths where numerous cavities are present and the permanent restoration of the teeth requires quite a long period of time, the cavities are cleaned of decay immediately, sterilized and filled with zinc cement. At the time of permanent restoration the inner portion of zinc cement can be retained as a base. Zinc cement wears and washes away readily and is the least permanent of the cements, so it should be used only as a temporary measure.

Copper cement:—Copper cement is more dense and harder and possesses valuable germicidal properties. In my opinion the red copper cement is to be given preference over the black copper cement. In large open cavities where proper cavity outline is impossible to attain, copper cement may be used. If it has to be retained for any great period of time it may be necessary to replace the outer portion as it wears away. In teeth to be shed in six months' time or less it serves well as a filling material. In mouths, extremely susceptible, it is wise to use it as a temporary filling until a better state of immunity is established before placing fillings of a more permanent nature.

Silicate cement:—Silicate cement is used in permanent anterior teeth when adequate dentinal protection is present.

Kryptex cement:—Kryptex cement, in my hands, has proved very satisfactory and useful. It is less translucent than silicate cement but seems to withstand mouth conditions better. In mouth breathers or individuals with short upper lips, where silicates in permanent teeth become dry and chalky in appearance, kryptex will withstand conditions better than silicate cement. In anterior deciduous teeth it is always used wherever a cement can be retained. In posterior permanent teeth it is used to fill enamel defects and deep grooves at the time of eruption. Where the pits, fissures or grooves have been cut out and color is a factor to be considered, kryptex may be used as the filling material. Where a definite cavity preparation is made, a heavy mix on a cold slab, packed and confined to the cavity, gives a dense and resistant filling. Where grooves are being protected, a heavy creamy mix prepared on a cold slab and confined to the area by modeling compound impression will prove successful.

Amalgam

Copper amalgam:—Copper amalgam is affected by the fluids of the mouth. It is rather difficult to keep it from impinging upon gingival tissues because of its slowness in setting. It is germicidal in action and is the best material for use where it is impossible to exclude all moisture from the cavity. It seems to be less irritating to the pulp and does not conduct thermal changes as readily as silver amalgam. A much denser filling, less subject to wear and quicker setting, can be attained if the excess mercury is expressed and the mix mulled in the hands until soft. Upon repeating this procedure several times it is amazing to see the amount of mercury that can be expressed from most copper amalgam without getting too dry a mix. It is also used in gingival cavities of posterior teeth in mouths that are susceptible.

Silver amalgam:—Silver amalgam is the most used of all filling materials and has proved to be one of the most satisfactory. It is quicker setting and has greater edge strength than copper amalgam. It will reproduce a better contact and protect the interproximal tissue better than copper amalgam. An exacting technic with a well-adapted matrix will produce an efficient filling. In the deciduous molar teeth, proximal cavities can be restored if sufficient bulk of material can be used at the junction of proximal and occlusal surfaces to prevent breakage. Sometimes it is necessary to round the opposing cusp, if it is too prominent, lest a fracture result after a

(Continued on page 337)

Roster of Essayists for 1941-1942 Programs Presented by the Study Club Committee

A roster of essayists who are available for the 1941-1942 program season is presented in this issue by the Study Club Committee of the Illinois State Dental Society. The list is not complete and a supplementary one will be published as soon as possible.

This year the Study Club Committee is again cooperating with the Dental Health Education Committee, the Membership Committee and the Dental Health Education Division, State Department of Health, in arranging dental health institutes. It is the aim of the committee to arrange a dental health institute in each one of the seven districts of the state.

In order that each member will be a little closer to the committee and the committee a little nearer to each member, the Study Club Committee is composed of one member from each district: *Northwestern District:* M. J. Nelson, 807 Fifth Avenue Building, Moline; *Northeastern District:* J. M. Williams, 501 Graham Building, Aurora; *Central District:* C. E. Bollinger, Alliance Life Building, Peoria; *Central-Western District:* Jesse F. Keeney, 303 Majestic Building, Quincy; *Central-Eastern District:* G. L. Kennedy, Villa Grove; *Southern District:* W. A. McKee, Benton; *Chicago District:* George W. Hax, 8 South Michigan Avenue, Chicago.

Each member of the committee has done much work in order that a worthwhile program could be presented. It is suggested that those in charge of programs make their selections from the roster as early as possible so that they will not be disappointed.

This roster should be retained for future reference as it will not be published again.

ILLINOIS STATE DENTAL SOCIETY STUDY CLUB INSTRUCTORS

Histology

Dr. Isaac Schour, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Balint Orban, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. H. B. G. Robinson, School of Dentistry, Washington University, 4559 Scott Avenue, St. Louis.

Porcelain Work

Dr. Stanley D. Tylman, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. F. N. Bazola, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. H. W. Oppice, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dental Health Education

Dr. Charles F. Deatherage, Chief, Division of Dental Health Education, State Department of Public Health, Springfield.

Orthodontia

Dr. George H. Herbert, 7002 Pershing, St. Louis.

Dr. Allan G. Brodie, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. William Downs, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. John R. Thompson, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Ernie Meyer, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Abraham Goldstein, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. William Alfred Kemper, College of Dentistry, Indiana University, Indianapolis.
Dr. Howard I. Michener, 1608 West Madison Street, Chicago.
Dr. J. J. Vlk, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Children's Dentistry

Dr. David B. Law, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.
Dr. Elsie Gerlach, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. John M. Spence, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Oral Surgery, Minor Oral Surgery and Anesthesia

Dr. Glenn Jasper Pell, College of Dentistry, Indiana University, Indianapolis.
Dr. Ernest David Cofield, College of Dentistry, Indiana University, Indianapolis.
Dr. F. W. Merrifield, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.
Dr. Eli Olech, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. Louis W. Schultz, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. P. G. Puterbaugh, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.
Dr. John Svoboda, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.
Dr. Warren R. Schram, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.
Dr. Jacob Berman, College of Dentistry, Indiana University, Indianapolis.
Dr. George Thaddeus Gregory, College of Dentistry, Indiana University, Indianapolis.
Dr. C. K. Dittmer, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.
Dr. Joseph G. Kostrubala, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.
Dr. R. L. Ladd, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. H. J. Droba, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. Josef Samors, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. J. F. Herman, 627 Jefferson Building, Peoria.
Dr. J. B. Brown, Metropolitan Building, St. Louis.
Dr. William B. Spotts, lecturer on anesthesia, University Club Building, St. Louis.

Full Dentures

Dr. Frank Carlyle Hughes, College of Dentistry, Indiana University, Indianapolis.
Dr. Warren Vance Hanson, College of Dentistry, Indiana University, Indianapolis.
Dr. E. C. Pendleton, diagnosis and research in denture construction, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.
Dr. J. S. Kellogg, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. W. H. Kubacki, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. M. B. Hattenhauer, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. Richard Holic, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.
Dr. Charles S. Helm, stabilizing lower dentures, 1209 Talcott Building, Rockford.
Dr. L. E. Kurth, 180 North Michigan Avenue, Chicago.

Dr. Henry Glupker, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. R. R. Blanchard, First National Bank Building, Springfield.

Dr. William N. Holmes, 220 South Michigan Avenue, Chicago.

Dr. Walter A. Wykhuis, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. J. H. Pearce, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. C. W. Gieler, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Partial Dentures

Dr. Chester A. Stanley, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. Sumner X. Pallardy, College of Dentistry, Indiana University, Indianapolis.

Dr. J. S. Kellogg, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. W. H. Kubacki, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. M. B. Hattenhauer, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Richard Holic, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Henry Glupker, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. W. I. McNeil, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Operative Dentistry

Dr. W. E. Wilson, the use of acrylics in operative dentistry, 504 Myers Building, Springfield.

Dr. Wallace M. Peters, gold foil, 511 Central National Bank Building, Peoria.

Dr. Harry Joseph Healey, College of Dentistry, Indiana University, Indianapolis.

Dr. Webb Gurley, School of Dentistry, Washington University, 4559 Scott Avenue, St. Louis.

Dr. Eugene Bodmer, gold inlays, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. Z. M. Shafer, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. W. A. J. Link, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. R. K. Baxter, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Warren Willman, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. William Hopkins Crawford, College of Dentistry, Indiana University, Indianapolis.

Dr. John Lacy Wilson, College of Dentistry, Indiana University, Indianapolis.

Dr. Henry Birt Morrow, College of Dentistry, Indiana University, Indianapolis.

Dr. A. H. Mueller, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Paul W. Dawson, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Robert Gardner Boggs, College of Dentistry, Indiana University, Indianapolis.

Dr. Drexell Allen Boyd, College of Dentistry, Indiana University, Indianapolis.

Dr. Joseph Eugene Buck, College of Dentistry, Indiana University, Indianapolis.

Dr. Herbert Philip Werkman, College of Dentistry, Indiana University, Indianapolis.

Crown and Bridge

Dr. H. W. Oppice, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Robert McBoyle, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Ert Jay Rogers, College of Dentistry, Indiana University, Indianapolis.

Dr. Alva Overlin Humphreys, College of Dentistry, Indiana University, Indianapolis.

Dr. Robert Joseph Meyers, College of Dentistry, Indiana University, Indianapolis.

Dr. Stanley D. Tylman, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. F. N. Bazola, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. R. D. Curtis, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. E. H. Ragan, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. R. H. Johnson, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dental Pathology and Therapeutics

Dr. Ralph G. Larsen, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Virgil Cheyne, associate professor of histology and pathology, College of Dentistry, Indiana University, Indianapolis.

Dr. John Embich Buhler, College of Dentistry, Indiana University, Indianapolis.

Dr. O. B. Litwiler, oral pathology, Jefferson Building, Peoria.

Dr. E. C. Wach, materia medica, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Robert G. Kesel, root canal therapy, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. E. H. Kramp, root canal therapy, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. R. C. Ladd, oral pathology, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Maynard K. Hine, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Balint Orban, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. E. D. Coolidge, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. L. S. Fosdick, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Radiography

Dr. W. E. Koch, Jr., University Club Building, St. Louis.

Dr. Lewis Benson Spear, College of Dentistry, Indiana University, Indianapolis.

Dr. Robert R. Fosket, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. Earl P. Boulger, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Dwight C. Atkinson, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. E. J. Krejci, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dental Medicine

Dr. W. W. Dalitsch, medical problems in dentistry, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

W. D. Zoethout, Ph.D., Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Diagnosis

Dr. Robert Preston Boesinger, College of Dentistry, Indiana University, Indianapolis.

Dr. Paul Erwin King, College of Dentistry, Indiana University, Indianapolis.

Dr. John Svoboda, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dental Anatomy

Dr. Ralph Fouser, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Economics

Dr. Lon W. Morrey, public relations and public education, 212 East Superior Street, Chicago.

Dr. M. M. Lumbattis, Mt. Vernon.

Dr. James Burchard Carr, lecturer in practice management, College of Dentistry, Indiana University, Indianapolis.

Dr. H. L. Freidinger, 751 Citizens Building, Decatur.

Dr. Lloyd H. Dodd, 860 Citizens Building, Decatur.

Dr. Harold Hillenbrand, 100 West North Avenue, Chicago.

Periodontia

Dr. Bernard D. Friedman, 25 East Washington Street, Chicago.

Dr. Clarke E. Chamberlain, 633 Jefferson Building, Peoria.

Dr. Balint Orban, pathology and treatment of so-called pyorrhea, traumatic occlusion and its chemical significance, the deep pocket and its treatment, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. E. D. Coolidge, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. R. W. Swanson, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Physical Properties of Metals and Other Dental Materials

Dr. William P. Schoen, Jr., Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

Dr. Maynard K. Hine, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago.

Dr. Earl E. Shepard, School of Dentistry, Washington University, 4559 Scott Avenue, St. Louis.

Oral Hygiene

Dr. Ellis G. Bovik, Northwestern University Dental School, 311 East Chicago Avenue, Chicago.

Dr. Charles F. Deatherage, Chief, Division of Dental Health Education, State Department of Public Health, Springfield.

Dr. E. D. Coolidge, Chicago College of Dental Surgery, 1757 West Harrison Street, Chicago.

The Study Club Committee has secured instructors in fifteen different departments of dentistry for the coming year. Almost all possible fields of program interest will be thoroughly covered by instructors who have won distinction as clinicians and teachers. Chairmen of program committees are urged to make their selections as soon as possible so that arrangements may be concluded with the instructors at any early date. This is essential as many instructors' speaking schedules will be filled in the near future.

Supplementary List

As soon as possible the Study Club Committee will publish a supplementary list to the instructors named above. The entire list will not, however, be published again, so those interested are asked to retain this list for future reference.

The Study Club wishes to express its appreciation to the many instructors who have volunteered to take assignments during the coming year. They have been most helpful in allowing the Study Club Committee to present one of its finest programs in recent years.—*Arthur E. Glawe, Chairman.*

CURRENT NEWS AND COMMENT

APPOINT STATE DENTAL PREPAREDNESS COMMITTEE

A state committee to cooperate with the Dental Preparedness Committee of the American Dental Association has been appointed for Illinois by President J. Roy Blayney. This committee, which continues the work undertaken by a similar committee last year, now has an enlarged personnel. Dr. C. L. Cassell, Decatur, remains as chairman with Dr. L. H. Jacob as secretary of the committee.

The members of the state Dental Preparedness Committee are: C. L. Cassell, Decatur, chairman of the Military Committee and chairman of the Preparedness Committee; F. F. Molt, Chicago, member of the Military Committee; Paul W. Clopper, Peoria, member of the Military Committee; J. R. Blayney, Chicago, president of the Illinois State Dental Society; Neil D. Vedder, Carrollton, president-elect of the state society; L. H. Jacob, Peoria, secretary of the state society and secretary of the committee; Glenn E. Cartwright, Chicago, president of the Chicago Dental Society; Harold W. Oppice, Chicago, secretary of the Chicago Dental Society; W. Ira Williams, secretary of the State Board of Dental Examiners; W. H. G. Logan, Chicago, dean of the Chicago College of Dental Surgery, Dental School of Loyola University; Charles W. Freeman, Chicago, dean of the Northwestern University Dental School.

IERC REPLACED BY PUBLIC AID COMMISSION

The Illinois Public Aid Commission is the new agency which will supersede the old Illinois Emergency Relief Commission. Legislation creating the new commission was passed by the legislature during the last session.

Governor Dwight Green appointed as members of the new aid commission all those who were members of the IERC on the day of the passage of the new relief act. The act gives the aid commission the same powers and functions that were exercised by IERC. The new body differs from the old in name and in the fact that no limit is set upon its life, whereas the IERC was constituted as a temporary body and its life was extended from time to time. Edward L. Ryerson, Jr., is chairman of the new commission and Russell L. Peters is executive secretary.

HEAVY PENALTIES FOR AIDING DRAFT EVADERS

Any physician or dentist who tries to help a selectee evade draft service faces severe penalties, according to an announcement made recently by officials of the state Selective Service office. The warnings were prompted by current stories of malingering among men called for physical examination. Specifically, Paul G. Armstrong, state director of Selective Service, said that in Springfield and other communities "an increasing number of registrants" is appearing for physical examinations showing evidence of recent tooth extractions, "in every case with just enough teeth gone to prevent acceptance of the registrant for service."

Major Victor A. Kleber, Cook County director, said that several cases had turned up in the Chicago area as well. Maj. Kleber said that the few cases of tooth extraction noted in the Chicago area were in the dubious zone, where it would be difficult to prove the charge, and that no prosecutions were in sight

immediately in that area, whatever might be the situation in Springfield.

The Selective Service Act itself provides heavy fines and jail sentence for conspiracy to evade service.

In commenting on this problem, Dr. Glenn E. Cartwright, president of the Chicago Dental Society, invited Director Armstrong to begin prosecution of any dentist who might be involved in conspiracy to evade service. Dr. Cartwright also promised the full cooperation of his society in any such prosecutions.

F. B. NOYES RECEIVES KETCHUM AWARD

The Ketchum Memorial Award for 1941 was presented to Dr. F. B. Noyes, dean emeritus of the University of Illinois College of Dentistry, at a recent meeting of the American Association of Orthodontists. The award is made annually to persons who have made valuable contributions to the science of orthodontics.

DR. E. N. HAHN DIES SUDDENLY IN CHICAGO

Dr. Edward N. Hahn, member of the Chicago Dental Society, died suddenly at his work in his Chicago office on July 11. Dr. Hahn, who was 54 years old, was a graduate of the Chicago College of Dental Surgery in 1918. He is survived by his widow, three sisters, one brother and a daughter.

SEND CHECK FOR ANNUAL TRANSACTIONS

Copies of the annual *Transactions of the Illinois State Dental Society* are available to members at one dollar a copy. Orders should be placed as soon as possible with Dr. L. H. Jacob, Secretary, 634 Jefferson Building, Peoria, and check or money order should accompany each request.

AIR PROGRAMS TO AID NUTRITION

Two radio programs to provide accurate information concerning food needs and the relation of food to health will be on the air over stations of the National Broadcasting Company during August. These programs, which were inaugurated in June, are a part of the national drive for better nutrition for the American people.

Listen America is a program sponsored by the Women's National Emergency Committee. This series is broadcast on Friday at 8:30 p.m., central standard time, over the red network of the National Broadcasting Company. *The National Farm and Home Hour* is the program of the United States Department of Agriculture and is broadcast on Tuesday at 10:30 a.m., over the blue network of the National Broadcasting Company.

On August 12 Helen Mitchell, Ph.D., will speak on *Good Nutrition Makes Life Longer and Happier* over the blue network at 10:30 a.m.

MIDCONTINENT DENTAL CONGRESS IN NOVEMBER

The Midcontinent Dental Congress, sponsored by the St. Louis Dental Society, will be held on November 16-19 at the Hotel Jefferson, St. Louis.

HEARINGS HELD ON DENTAL RESEARCH BILL

Hearings on the Dental Research Bill were held on July 14 in Washington before a subcommittee of the Committee on Interstate and Foreign Commerce of the House of Representatives. The bill, which was sponsored by the National Health Program Committee of the American Dental Association, has passed the Senate and now awaits the action of the House.

PROPOSE NEW A.D.A. SECTION

The establishment of a new section of practice management by the American Dental Association is being urged through a resolution adopted by the Cleveland Dental Society. This resolution will be presented to the House of Delegates at Houston in October. Officers of component societies in this state are asked to send their opinions to the secretary, Dr. L. H. Jacob, 634 Jefferson Building, Peoria. The information received from these opinions will be placed before the state delegates for consideration.

The text of the resolution presented by the Cleveland Dental Society follows:

Whereas: The proper conduct of dental practice is of vital importance to every dentist and

Because, the contemporary economic situation is so complex and thereby confusing to the average practitioner, making it desirable for him to be instructed in the many changes which are constantly taking place and

Whereas: The instruction has in part been given through the inclusion of this subject in local, state, and national dental programs which, while inadequate at the present time, have in the past fulfilled a primary purpose in answering a definite need of the profession and furthermore

Because: An opportunity is needed to progress along strictly ethical professional channels a medium for encouraging such progress is of immediate consideration. Therefore, be it resolved:

That since the importance of practice management has been established; and because of the above mentioned reasons a medium for further progress is necessary; The Cleveland Dental Society through its representatives (The Council) hereby presents a petition to the American Dental Association to establish a section in Practice Management. This section to be organized and conducted as are the several other sections of the association.

Conclusion: I move the adoption of this resolution, that it be published in our bulletin and that a copy of the resolution be sent to the American Dental Association for reference to the proper committee, and to each component society in our state and at least one major component society in each of the other states, urging similar action as suggested above. Motion was duly seconded and carried.

REPORT OF PEORIA DENTAL PROGRAM

Of five thousand grade school children given dental examinations, almost 11 per cent were found to have mouths in good condition and did not need dental care at the time the examination was made. This finding is announced in the annual report of the Dental Department of the Peoria Public Schools, of which Dr. C. Carroll Smith is the director.

The report shows that 5,143 pupils were examined in 23 schools. Of these 560, or 10.88 per cent, did not need dental service; 1,146, or 22.28 per cent, were under the care of their own dentists; 797, or 25.48 per cent, were being cared for by school dentists.

APPOINT NATIONAL NUTRITION DIRECTOR

Milburn L. Wilson, director of extension service in the U. S. Department of Agriculture, Washington, D. C., has been appointed director of nutrition as an assistant to Paul V. McNutt, coordinator of health, welfare and related activities. Mr. Wilson will be in charge of all government nutrition activities, will direct educational programs in the proper preparation of foods and will seek to enhance the nation's health by improving its diet.

NEW FEDERAL FUNDS AVAILABLE FOR HEALTH

The sum of 11 million dollars is now available to assist states, counties, health districts and other political subdivisions of the states in establishing and maintaining adequate public health activities. This sum was made available for the fiscal year ending on June 30, 1942, through federal legislation which was approved on July 1.

Approximately one-fourth of the

money will be allotted on the basis of population; approximately one-half, on the basis of (a) annual number of deaths in the state, (b) prevalence of various diseases, (c) need of regional training centers, (d) special conditions creating unequal burdens in the administration of public health services, and (e) health needs occasioned by national defense activities. The remaining one-fourth of the funds will be allotted on the basis of the financial needs of the states.

Allotted funds must be matched on a dollar-for-dollar basis by state or local funds.

HOUSTON PREPARES FOR A.D.A. MEETING

A large quantity of early reservations is being reported by the local committees in charge of arrangements for the 83rd annual meeting of the American Dental Association which will be held in Houston on October 27-31. In addition to the Rice Hotel, headquarters for the convention, more than thirty hotels are available for those attending the meeting. In another part of this issue, a list of hotels will be found. Members are urged to make reservations at once, indicating first and second choices in hotels and giving details of the accomodations desired. Reservations should be sent to Charlotte Becraft, Field Secretary, American Dental Association, Rice Hotel, Houston, Texas.

DENTAL STUDENTS' REGISTER IS PUBLISHED

Almost eight thousand undergraduate students are enrolled in the dental schools of the country, according to information contained in the Dental Students' Register, recently published by the Council on Dental Education of the American Dental Association. The Register is a series of statistical tables published annually by the Council to indicate trends in dental education and licensure.

Enrolled in the regular four year course, as of October 15, 1940, were 7,720 undergraduate students. In addition there were 591 students in special, graduate, postgraduate and dental hygiene courses. The total of dental students, including all classifications, was 8,311 of which 7,902 were men and 409 were women.

Women students were distributed as follows: in the regular four year dental course, 88; in dental hygiene, 316; in special courses, 5.

The distribution of undergraduate students reveals that 2,305 were freshmen; 1,973 were sophomores; 1,841 were juniors and 1,601 were seniors. Enrolment in the dental schools of the country varies from 41 to 551, with an average of 198 students.

Of 7,720 undergraduates enrolled in the regular four year course, only 82 had less than two years of predental college training and these had entered dental school before the two year requirement became generally effective. Of the balance, 3,875 had two years of predental training; 1,338 had three years; 223 had four years but did not secure the bachelor's degree; 2,090 had four years with the bachelor's degree, and 112 with other degrees.

In the 39 dental schools of the country there are 2,400 teachers. Of these 641 are engaged in full-time teaching with 1,759 on part-time schedules. In the calendar year of 1939 2,744 graduates were examined by licensing boards. Of these 2,196 were passed and 548, or 20 per cent, were failed. Seven state licensing boards passed all applicants while 15 boards failed 30 per cent or more.

MEDICAL STUDENTS TO RESERVE POOL

In June the War Department rescinded an authorization pertaining to the appointment of medical students as second lieutenants in the Medical Administrative Corps and substituted other authorizations. Now medical students

who are appointed as reserve officers in the Medical Administrative Corps will be transferred to the War Department Reserve Pool and retained there until eligible for appointment in the Medical Corps Reserve or until discharged. These appointments will be made without reference to an examining board as prescribed in army regulations, and corps area commanders are authorized to waive the minimum qualifications for appointment of physically qualified male citizens who have successfully completed the first two years in an approved medical school in the United States.

PARRAN ASKS FOR MORE HEALTH FUNDS

Dr. Thomas Parran, Surgeon-General of the United States Public Health Service, announced in July that almost two billion dollars of additional funds would be needed to provide the proper health facilities in preparedness areas. He estimated that $1,885,137,891 would be needed to meet present problems. Of this amount $170,874,294 is to be devoted to medical care.

KANSAS CITY-WESTERN MERGES WITH K. C. U.

Announcement was made in July that the Kansas City-Western Dental College had been merged with the University of Kansas City and would henceforth be known as the School of Dentistry of the latter institution. Dr. Roy J. Rinehart, who was dean of Kansas City-Western, for the past twenty years will remain as dean of the merged institution. The faculty of fifty-two dentists and physicians will comprise the faculty of the new school.

Kansas City-Western Dental School ranks as the seventh largest dental school in the country from the point of view of enrolment. It was established in 1881 as the dental department of the old Kansas City Medical College. This became a separate school, the Kansas City Dental College, in 1889. The Western Dental College, established in 1890, was consolidated with the other in 1919.

PY-RO REJECTED BY A.D.A. COUNCIL

Py-Ro, a product claimed to be useful as an "antiseptic for treatment and prevention of pyorrhea, trench mouth, bleeding gums, cankers and mouth sores," was found "not acceptable" in a recent report issued by the Council on Dental Therapeutics of the American Dental Association.

"Py-Ro," the report states, "is essentially a dilute solution of sodium hypochlorite, containing additional irrational ingredients. It is promoted to the laity under a therapeutically misleading name and with unwarranted claims." For these reasons the product was not accepted for inclusion in *Accepted Dental Remedies.*

CARNEGIE FELLOWSHIPS FOR DENTAL RESEARCH

The School of Medicine and Dentistry of the University of Rochester, aided by the Carnegie Corporation, offers scholarships paying $1,200-$1,800 per year to well-trained dental graduates who are interested in research or who desire special training in the basic medical sciences as an aid to dental teaching or practice. A few fellowships also offer part-time training in oral surgery. Applications should be made to George H. Whipple, Dean, School of Medicine and Dentistry, University of Rochester, Rochester, N. Y.

W. A. MC KEE APPOINTED TO STATE BOARD

Announcement has been received that Dr. W. A. McKee, of Benton, has been appointed to the State Board of Dental Examiners by Governor Dwight Green.

Dr. McKee, who succeeds the late E. F. Hazell, is a long-time member of the Illinois State Dental Society and a recent past president of that organization.

NOVEMBER MEETING FOR WESTERN PENNSYLVANIA

The annual meeting of the Odontological Society of Western Pennsylvania will be held on November 11-13, at the Hotel William Penn, Pittsburg. Further information may be obtained from W. Earle Craig, secretary.

EDUCATION COUNCIL ISSUES BROCHURE

A brochure on *Dentistry as a Career* has been issued by the Council on Dental Education of the American Dental Association for the use of guidance officers and prospective students.

The Council has prepared this bulletin "with the sole purpose of helping parents, youth and guidance officers fairly to appraise the field of dentistry and the opportunities it offers for a happy and fruitful career. The Council is not engaged in recruiting students, nor in the mere multiplication of numbers in dental schools."

Sections of the brochure are devoted to the historical background of dental practice, to dental education and practice, to professional organization and to the auxiliary fields of service.

STATE MEDICAL SOCIETY ELECTS

Dr. Edward H. Weld, of Rockford, was named president-elect of the Illinois State Medical Society at its recent meeting in Chicago and Dr. Charles H. Phifer, Chicago, was inducted into the presidency. Springfield was chosen for the 1942 meeting. Dr. Hubbard P. Saunders and Fred H. Muller, Chicago, were chosen vice-presidents. Dr. Harold M. Camp, Monmouth, is the new editor of the society's journal. He will continue as secretary-treasurer. Dr. Clayton J. Lundy, Chicago, a member of the staffs of LaRabida-Jackson Park Sanitarium and Rush Medical College, Chicago, received the society's first medal for the best scientific research exhibit.

DR. MICHAEL J. BUCKLEY, OF CHICAGO, DIES

Dr. Michael J. Buckley, of Chicago, died on July 30 in his home at Oak Park after an illness of two years. Dr. Buckley, who was 64 years old, was a graduate of Northwestern University and formerly an instructor in orthodontia at that institution. Funeral Services were held on August 1 with interment in Mt. Carmel cemetery. Dr. Buckley is survived by his widow, Christine, and two sons.

CHICAGO COLLEGE PLANS HOUSTON BREAKFAST

Plans are being made for an alumni breakfast of the Chicago College of Dental Surgery, Dental School of Loyola University, to be held during the meeting of the American Dental Association in Houston, Texas. The breakfast will be held on Wednesday, October 29, at 7:30 a.m., in the South American Room of the Rice Hotel. All alumni in attendance at the convention are cordially invited to attend.

CHICAGO DENTAL SOCIETY ANNUAL OUTING

The Chicago Dental Society will hold its annual golf outing at the Medinah Country Club on September 10. A baseball game will be in progress for those who do not play golf. The dinner, served in the club house, will climax the day for those in attendance. Dr. Bob Placek is chairman of the committee in charge of the arrangements.

HERE and THERE

Out of the effete east comes an idea that may or may not revolutionize the practice of dentistry. A psychiatrist of Westport, Connecticut, together with a fellow townsman, a dentist, has been conducting some studies relative to the apprehension of pain and the possible lessening of said apprehension by purely psychological means. The last issue of the *Journal of the American Dental Association* carries the story and the crux of the matter is concisely stated in this paragraph: "If a patient is well, if he is happy, if he has just eaten a good meal (he might have added, if he has just had a good drink) and is thereby slightly somnolent, he will be easier to handle. This means that the most apprehensive patients should be seen at the time of day when in their natural mood cycle they are at their best. Some people are happier in the morning, some in the late afternoon or evening."

Belonephobia

The fear of pointed things, belonephobia it is called, is something everyone has and whether it be a needle at the end of a hypodermic syringe or a drill at the end of the engine arm makes no great amount of difference; people just don't like it. The good doctor goes on to say that women make the best patients because they are often the "clinging vine" type. There're many of us that can refute that bit of logic, especially around the home. "There is a universal impulse to avoid the threatening agent by flight." We can believe that! Who among us has not had the experience of a patient getting as far as the reception room door and then ducking out to come again some other day? But on the whole the doctor's premise is correct and dentists would do well to take a course in psychology to help them better understand their patients' reactions.

The residents of the County Home in a small town in North Carolina recently went in a body to the office of the County Commissioners complaining that they were unable to masticate their food properly and would the commissioners please supply them with "false teeth." Well, there was no item in the budget for such an expenditure and so the commissioners compromised by buying a secondhand meat grinder. They probably figured that if the meat was ground up finely enough the old folks could just "gum" it.

Vitamins

A famous authority in Pittsburg comes forward with still another explanation for the number of rejectees under the Selective Service Act. He claims that American mothers deemed it "old fashioned" to nurse their babies a couple of decades ago and since the teeth are the first tissues of the body to be affected by a vitamin C deficiency it is very important that the babies have large supplies of this vitamin. Mothers' milk contains from four to five times more vitamin C than cow's milk. However, the pasteurized or evaporated milk that was fed to those babies then had even less of it. Pasteurization used to reduce the vitamin C content by some 50 per cent. Since then a good deal of progress has been made and milk loses little of its vitamin C content through pasteurization and evaporation processes.

Actor-Dentist

Many of you have seen the motion pictures "Arizona," "Escape to Glory," and more currently, "Penny Serenade," but we'll gamble that no one was aware that one of the best bits of character acting in these films was done by a dentist. Edgar Buchanan is the gentleman's name and when he's not in pictures he's

practicing in the town of Altadena, California. Dr. Buchanan came up the hard way, starting out his career in stock company productions. It was while he was acting in the Pasadena Community Playhouse that a scout from the Columbia Studios discovered him and signed him up the very next day to a seven year contract. Needless to say Dr. Buchanan spends more time now in Hollywood than in his dental office at Altadena. And, what's more, he's probably better paid!

Women

Somebody's crazy! The government of France issued a proclamation, some time ago, to the effect that women were no longer wanted in industry. Women's place was in the home and they were urged to return to their, "natural, prime, traditional purpose" of raising soldiers. Here in the U. S. A. on the other hand, women are becoming more and more a part of the industrial machine. There are so many men engaged in producing defensive weapons that their place in plants fabricating purely domestic materials is being taken over by women. If there's any one tune that's still popular in this country it's the one about, "I didn't raise my boy to be a soldier." Still we can't brag too much. We see by the papers that Italy has lowered the age limit for marriage to fourteen and that scandalizes us. But did you know that ten states of the Union have such a statute on the books right now and that in ten others the age limit is twelve?

Connecticut

Then, to make us look all the more ridiculous, the State of Connecticut passes a law forbidding women to work after 10 p.m. or before 6 a.m. (hotels exempted). That little piece of law-making threw only 3,000 women out of work! In the meantime the Department of Labor put this little item before the public. "Industry is America at Work: it is all employers, all employees. The corner boot-black dependent upon the manufacturer for materials and supplies is part of it; so is the executive who draws together raw material, skilled labor, and capital to bring to birth anything from a mouse-trap to a locomotive."

Labor

Every person in this country is engaged in productive labor, who is leading a self-supporting life . . . every such person is playing his or her part in American industry. So when the world seems on the verge of going to pot, it is good to be reminded that there are still things worth living for.

The Membership Committee of the State Society should be given a boost. The Sage of Wood River, Jim Mahoney, is Chairman of this committee and has seven regular guys to help him: S. A. Wiggins of Rock Island, Bernard Thiel of Elgin, J. M. Williams of Aurora, C. E. Bolinger of Peoria, Jesse Keeney of Quincy, G. L. Kennedy of Villa Grove, W. A. McKee of Benton and, our old friend, Julius Ferm of Chicago. These men are all enthusiasts and can be counted upon to do a job.

Verbigeration

There seems to be an almost total lack of verbigeration (no charge for that one) this month. Our reporters all seem to be either on vacation or getting ready for one . . . Mel Zinser, the so-called business manager of the JOURNAL (we often wonder how much he works at it) has a summer place up at Lake Delavan that's a darb. Two guest cottages and a speed-boat lend an air of aristocracy. But they are the only things that do. Mel goes in for raising sheep, so far not a particularly profitable venture.—*James H. Keith.*

EDITORIAL

FIRST CLASS MAIL

In this day of uncertainty there are many topics on which divergent and conflicting opinions are held. There are also many problems for which solutions are urgently needed and these are often best reached through the unhampered expression of individual opinion.

To provide a forum for the expression of such opinions, this journal will inaugurate a new department to be known as *First Class Mail.* Here the reader may agree or disagree, accept or reject, smile or shudder at opinions held by himself or others. The only limitations are that such letters should be prepared in the usual form, be signed with name and address, comment on topics of general interest to those who receive this magazine and stay out of the clutches of the laws which pertain to libel and similar offenses.

Not all of the letters received will be printed and selection will be made on a basis of what they say and how they say it.

Letters should be sent directly to the editor and should bear the full signature of the sender. The department, *First Class Mail,* will appear as frequently as interest and contributions dictate.

DENTAL REHABILITATION

The Selective Service Act has not provided as many men for military service as anticipated because of physical defects found among the registrants. This fact is made very clear in the recent announcement that almost half of the first million men examined were not qualified for active military service. Of these, 380,000 were not fit for any military service whatever and the balance, 120,000 were qualified only for limited service.

The reasons for such results are many and are not the subject of discussion here. Several considerations of importance, however, arise out of these findings. First, a large part of the country's manpower is not available for military service; second, dental defects cause the physical disqualification of a large number of registrants; third, the correction of these defects would restore many disqualified registrants to eligible classifications.

Even in a time of limited emergency there are serious implications in this unavailability of manpower. If the tempo of the emergency should increase, it is obvious that it would have a powerful impact on military and industrial enterprises. A remedy should be sought and applied immediately.

Selective Service officials have taken some steps in this direction by the announcement of a plan for dental prehabilitation. Under it prospective draftees are informed of the dental requirement and urged to meet it by having their defect corrected before appearing before their local draft boards. It will be seen that this is basically an educational program and subject to the limitations of all such programs in that it will not produce an immediate and large-scale effect. In addition, the prehabilitation program cannot reach those registrants who are without funds to pay for the dental care needed and this group, needless to say, is a large one.

The dental profession has recognized the deficiencies of the prehabilitation plan and has turned its attention to the problems involved in rehabilitating draftees who have been rejected by draft or induction boards because of the presence of

remediable dental defects. If such registrants, who have been placed largely in Class I-B or IV-F, can be given the dental care needed, they will be qualified for entrance into Class I-A and eligible for immediate and full military service.

Dental care can be made available for this group in two general ways. First, the draftees can be inducted into the military service provisionally and receive the needed care from the hands of military dentists. Second, they can be given dental care by civilian dentists if funds are made available for that specific purpose.

The first plan cannot be put into effect without lowering, temporarily or provisionally, the dental standards set up for the army. It is not likely that this will be done as officials have recently announced "that the Army will maintain its present high physical standards of eligibility for military service and will not undertake the rehabilitation after induction of men classified by Selective Service and army induction boards as having remediable physical handicaps."

The second approach, therefore, must be used to solve this problem. This involves the provision of funds for needed dental work since the responsibility of the dentist and of the dental profession does not extend to providing free service. Once funds are provided they must be spent through agencies in state and community which are best able to determine local needs and methods of satisfying that need.

Fortunately the organized profession has already set up the principles to guide such a program and has specific suggestions for the creation of a mechanism to carry out the program. In both the traditional rights of the public and the quality of service it is to receive have been surrounded with ample safeguards. The program was approved by the House of Delegates of the American Dental Association in 1939 and presented to proper government officials for consideration.[1] There is no good reason why this program should not be applied immediately to the problem at hand.

Recently a special commission was appointed to study the problems involved in the rehabilitation of registrants under the Selective Service Act. The report of this commission will be found elsewhere in this issue.

It is interesting to note that the commission proposes a solution in which defects will be corrected on a voluntary basis. It warns, however, that unless funds are provided "little progress in voluntary physical rehabilitation is to be expected." This is a realistic approach that recognizes existing economic conditions and the soundness of a voluntary basis for such a program.

It is proposed, in the commission's report, that registrants with remediable defects be placed in special classifications, I B-R and IV F-R. Confidential records of such registrants are to be made available to proper government officials for examination. Each registrant thus classified will be informed in writing of the underlying condition that has caused such classification. He will then be advised that the draft board has allowed a given period of time for the correction of the defect, after which he must report back to the board for reexamination and reclassification. State and local rehabilitation committees are to be created to collaborate with professional, local government and voluntary groups. In order to provide funds, the commission recommends that "Congress enact legislation to defray the cost."

It is known that such a program is now before government officials in Washington and that legislation will soon be asked of the Congress to put it into effect. While such legislation is pending every effort should be made by the organized profession to secure ample safeguards against the establishment of undesirable

[1] See *Report of the National Health Program Committee*, July 17, 1940. Available on request from the American Dental Association, 212 East Superior Street, Chicago.

forms of dental practice, either now or in times less critical. If this is done the dental profession can participate without hesitation in a national plan to rehabilitate registrants to furnish needed manpower. If this is not done there will be a natural assumption that the pressure of the emergency is being used to force compliance with a program that is at odds with the announced principles of the organized profession.

END OF OCTOBER

At the end of October, when the torrid days of July and August will have been exchanged for the less exhausting ones of early autumn, the American Dental Association will convene for its 83rd annual meeting in the city of Houston. From all parts of the country dentists will gather on October 27-31 to maintain contact with the scientific progress that the profession has made in the past twelve months. But not all of such a visit need be in compliance with stern duty. Houston and the surrounding country of the Southwest offer unusual opportunities for a unique vacation. This double feature, to borrow a phrase from current cinematic usage, should convince many members that it is time to look up train and plane schedules for Texas.

ON CONTINUING EDUCATION

One of the great needs of the professional man is a chance to continue his education once the formal halls of learning have been left behind. The last two decades have produced a tremendous progress in all of the sciences that are associated with the conservation and protection of health. The present day student of dentistry is heir to that progress and leaves his classroom much better equipped than the dentists of a generation ago. If the education of the dentist stopped with the acquisition of a diploma, the young graduate would thus have an undoubted claim to superiority in every field of dental practice.

That this is not universally true is a tribute to the education the practitioner secures after graduation in a variety of ways. Much of this continuing education is provided in study club courses conducted under the auspices of state and district dental societies. Less is provided through the postgraduate departments of the dental schools although, according to the recent Dental Students' Register, more and more dentists are taking advantage of this opportunity. The reading of current dental literature and attendance at scientific meetings also plays an important part in contributing to the continuing education of the dentist.

The Illinois State Dental Society has long provided extensive facilities to its members through the efforts of the Study Club Committee. Each year a list of distinguished instructors is compiled for the use of component societies in arranging scientific programs. Such a list will be found in this issue and it is recommended to all program chairmen. Instructors for fifteen different subjects are provided and many of these have won wide distinction in their fields. That these men serve with little or no compensation and often at considerable cost to themselves is an acknowledgment of the importance they place in the continuing education of the practitioner.

This emphasis is rightly placed. Unless the dentist is able to provide in his own practice the latest developments in dental art and science he deprives his patients of a service to which they are properly entitled. He restrains the progress of the

profession in reaching its goal of better and more adequate dentistry for every group of the population in this country. He keeps from himself those tangible rewards that accompany the provision of modern, scientific dental service. As a duty to the patients he serves and, if necessary, in self interest, the dentist must take every possible advantage of the facilities for such education that are placed before him.

In recent years it has become increasingly apparent to everyone who is familiar with the public health problems of dentistry that continued study in the field of dentistry for children is an absolute necessity for the profession. Under present conditions of knowledge measures for the control and prevention of dental diseases are most effective when applied during the earlier years of life. If there is to be a diminution in the annual, national accumulation of dental defects the approach must be made through the sound practice of preventive dentistry. To do this requires a competent knowledge of methods and technics that have been developed in recent years. The dental institutes, sponsored by the Study Club Committee and the Dental Division of the State Department of Health, are an important agency in making such information available to the practitioner. Attendance at these institutes, which will be held throughout the state during the coming year, is one of the best possible methods of continuing dental education in a highly important field of practice.

TWO DOLLARS A YEAR

In the past few months even the hot-weather technic of examining dental journals will reveal that the dentist and the dental profession face many trying problems. The national emergency has created many new ones, chief of which is the formulation of a plan for rehabilitation in which the dentist will not bear the entire burden. Legislation, always a source of new problems, perennially places the dentist on the defensive. The illegal advertising laboratory provides a permanent spring of freely flowing difficulties. Add to these the normal complexities of seeking existence in these times and the dentist has received his full dividend on the world's troubles.

Unaided, of course, the individual would soon find himself in complete surrender before the impossibility of his tasks. The fact that he does not so find himself is due to the efforts carried on in his behalf by the state and local dental societies. Day in and day out these organizations handle many problems that never see the light of a dental journal or reach the ear of a dentist busy with patients in his own office. Much of this work is done without thought of reward by the elected officers of the societies. Others require personnel and facilities that must be paid for if an effective job is to be done.

It is at this point that the average dentist does his part by paying his annual dues. The increasing number of tasks assigned to the dental societies has taxed the ability of such funds to do all of the work that should be done. The obvious answer is an increase in dues so that none of these highly important problems will be neglected. At its next annual meeting the Illinois State Dental Society will consider an increase of two dollars per year. There should be little debate. No man who values his own time can afford not to make this small investment in the conservation of his own energies and in the protection of the practice from which he derives his livelihood.—*Harold Hillenbrand.*

BOOK REVIEW

Twelve Periodontal Studies. By Harold Keith Box, D.D.S., Ph.D., Research Professor of Periodontology, Faculty of Dentistry, University of Toronto, Pp. 251. Price, $2.50. Toronto: The University of Toronto Press. 1940.

To those whose interest lies in the field of periodontology the writings of Dr. Box are well known. This volume contains the substance of his former publications and the lectures on periodontology delivered before the fifth year students of the University of Toronto Dental School. These twelve studies include the consideration of the anatomy, physiology, and pathology of the investing tissues of the teeth as well as the discussion of the etiology and methods of treatment of diseases of the periodontal membrane. One chapter is devoted to caries immunity.

Each chapter is preceded by an outline which enables the reader to review at a glance the material considered. At the close of each lecture is found a short bibliography. The book is well-prepared, printed on good paper in clear, bold type.—*J. R. Blayney.*

Pedodontics. By John C. Brauer, A.B., D.D.S., M.Sc., Head of the Department of Preventive Dentistry and Pedodontics, College of Dentistry, Iowa State University. Pp. 38 with 10 illustrations. Paper. Presented by the Minnesota Department of Health in cooperation with the Minnesota State Dental Association, n.d. n.p.

This is an outline of a postgraduate course in children's dentistry and was originally presented as a series of lectures to the dentists of Kansas. It is characterized by its concise approach to the practice of dentistry for children and by its detailed attention to the technical procedures involved in such practice.

There is a chapter on the management of the child patient and one on operative procedures. The latter provides sound instruction for cavity preparation, pulp therapy, the treatment of abscessed teeth and the construction of space retainers. As is essential in a concise treatment of the subject, it is taken for granted that the reader has a passing familiarity with the larger background of the subject under discussion.

In commenting on the management of child patients, Brauer has some sound remarks to make on a topic that has not always received such careful treatment. This section will be of value to the dentist who is interested in placing his handling of children on a more satisfactory basis. There are also interesting sections on oral prophylaxis, home care of the mouth and the treatment of fractured permanent incisors. A short working bibliography is appended. This could have been enlarged so that the reader could more easily seek extended discussion of a subject that the author treats briefly.

Many dentists will find this book of value for its practical procedures in dentistry for children. It is not a full length treatment of all problems, nor was it meant to be. But within that limitation, every dentist in general practice can read it with some measure of profit.

BOOKS RECEIVED

Dentistry as a Professional Career. A Brochure for the Use of Guidance Officers and Prospective Students. Chicago: The Council on Dental Education of the American Dental Association. 1941.

Report of Work Projects Administration Dental Project Sponsored by the Chicago Board of Education and the City of Chicago. 1941.

Sagebrush Dentist. As Told by Will Frackelton to Herman Gastrell Seeley. Pp. 246. Price, $2.50. Chicago: A. C. McClurg & Co. 1941. See review on P. 336.

THE NOTEBOOK

Editor's note: This department is inaugurated so that shorter notes of scientific interest may be presented. Occasionally, the material used will supplement original articles appearing in the same issue. In its other appearances The Notebook *will provide data of technical interest that is collected from a variety of sources. The object of the department is to provide authoritative information on a wide range of subjects in concise form.*

A symposium on the treatment of Vincent's infection, to be found in this issue, will provide the reader with three varying approaches to the treatment of Vincent's infection. In connection with these articles, the following summary of present-day knowledge of the disease should prove of interest.

Summary

The term "Vincent's infection" has been applied to a group of diseases in many parts of the body, differing widely in clinical character and severity, but all characterized by putrid gangrene, pseudomembrane formation, and the occurrence in the lesions of a distinctive mixed bacterial flora including spirochetes, fusiform bacilli, and other organisms. The same forms are widely distributed among the population at large, in the mouth, throat, and elsewhere, and in animals, in the absence of Vincent's infection; but there is an indication that they are greatly increased in numbers in any of a wide variety of inflammatory conditions, mild or severe. The component members of the flora are essentially anaërobic and for the most part difficult to cultivate. Several distinct varieties of spirochetes, and several kinds of fusiform bacilli, have been cultivated and described; and spirilla, vibrios, streptococci and other bacteria have been found characteristically in the flora. The organisms that have been grown in pure cultures have been found to have little or no independent pathogenicity for laboratory animals; but a mixture of four species, each in pure culture, has been shown to produce in animals typical putrid and necrotic lesions which are transmissible in series. The effective mixture, as now defined, comprises a spirochete, *Treponema microdentium* or *T. mucosum,* a fusiform bacillus (one of several varieties), a vibrio *(Vibrio viridans),* and an anaërobic streptococcus. The vibrio and the streptococcus, in themselves capable of producing transient pathologic effects, may act in these mixtures by providing the tissue damage required for proliferation and invasion of the spirochete and fusiform bacillus. In sections of Vincent's infection in many fusiform bacilli or spirochetes are both observed within the tissues, other bacteria being confined largely to the surface; the degree of invasion and tissue destruction seems to be correlated inversely with the degree of cellular response in the tissues.

Contagious transmission of infection in many has often been assumed but has not been demonstrated; there are indications that outbreaks, described in the literature as "epidemics" may have been due to dietary deficiency or other predisposing causes affecting populations living under uniform conditions. Clinically there is considerable evidence that such predisposing factors are important, perhaps, essential, for the development of Vincent's infection. It may be that any condition which causes tissue damage, whether it be traumatic, toxic, metabolic, or infective, may provide the necessary conditions for multiplication of the fuso-spirochetal flora, and that the character and severity of the resultant disease depends upon the nature and degree of this primary alteration. On the other hand a group of unrelated observations suggest that the mechanism of predisposition may be more uniform: that the determining factor may be a local or general decrease of polymorphonuclear leukocytes, induced by toxic effects or by a deficiency of a specific vitamin (part of the B_2 complex); but further investigation is needed to clarify this and many other phases of this subject.[1]

Drug List

A list of drugs used in the treatment of Vincent's infection is to be found in *Accepted Dental Remedies.*[2] Reference to the book will provide the details and methods of application and use.

Oxidizing Agents
Chloramine

[1] Rosebury, Theodor. *The Etiology of Vincent's Infection.* Dental Science and Art (edited by Gordon). Philadelphia: Lea & Febiger. 1938. P. 435.

[2] *Accepted Dental Remedies.* Chicago: Council on Dental Therapeutics, American Dental Association. 1939. P. 254.

Hydrogen peroxide
Hypochlorites
Potassium Permanganate
Sodium Perborate (?)

Astringents, Escharotics, etc.

Copper sulphate
Chromic acid
Iodine
Mercuric chloride
Silver nitrate

Spirocheticides and Amoebicides

Arsenious acid (Fowler's solution)
Arsphenamine
Bismuth sodium tartrate
Mapharsen
Neoarsphenamine

Dyes

Acriflavine
Brilliant green
Crystal violet
Pyridium

Unclassified

Boric acid
Soap
Sodium chloride
Tincture of Benzoin

Sodium Perborate

In discussing sodium perborate, widely used in the treatment of Vincent's infection, *Accepted Dental Remedies* comments:

Sodium perborate is an antiseptic deodorant, and bactericide and is used in wounds, purulent sores, etc. It is used extensively in cases of Vincent's infection because of its *supposed* property of liberating oxygen when in contact with mouth tissues, and is an ingredient of some tooth powders. Its action is thought to be due to liberation of oxygen with catalysts or organic matter in the presence of moisture. In Vincent's infection it is often applied in the form of a thick paste and allowed to remain in place some minutes before rinsing out. It has been observed that sodium perborate does not liberate all available oxygen at the acid reaction and temperature of mouth fluids. . . . When it is considered that sodium perborate, U.S.P., under the practical conditions of its use liberates only about 0.25 per cent oxygen, and since the exciting organisms are apparently lodged in the deep incubation foci, it would appear that this method of treatment, as well as others, should be subjected to critical study.[3]

[3] Ibid. P. 178.

The following items on a wide variety of topics are taken from current publications in dental, medical and general scientific fields.

Repair of Experimental Caries:—Experimental caries was produced by feeding rats a coarse-corn, caries-producing diet for 100 days. Animals sacrificed at the end of this period showed evidence of carious disintegration in the molar teeth. By examination under binocular microscope, using a fine explorer to test the cavity formation, soft areas of exposed dentin could be noticed. Upon histological examination the lesions showed deep penetration with the cavity base in close proximity to the pulp chamber and with little evidence of secondary dentin formation. One group of rats which had been on the caries-producing diet during the same period (100 days) were continued for an additional 2 months, during which time they received the stock diet of this laboratory (finely ground fox chow) that has been shown to be adequate in every respect. After the two months on this diet, the rats were sacrificed and the molar teeth examined.

Unexpectedly, the caries process had not only stopped but under binocular examination the exposed dentin was found hard and polished. Histological study of these teeth showed an unusual picture. The dentin had a sclerotic appearance and beneath every place where the outer part of the tooth had been subject to attack a new thick layer of secondary dentin had been laid down, which reestablished a safe distance between the external tooth surface and the pulp. In some cases this protective layer had attained the thickness of the original dentin.

This experimental approach, which permits histological evaluation of the reparative processes associated with carious disintegration, should offer a new field of investigation of the dietary and other factors involved in the control of dental caries. If such defensive processes can be promoted and the acute caries penetration prevented, it should be possible to save many teeth from severe destruction and its consequences.—Sognnaes, Reidar F. Dietary Repair of Experimental Caries. *Science* 93:617 (June 27) 1941.

Human Bite Infections:—Speirs discusses the data in 114 cases of human bite infection seen within a few hours after the trauma. The method (gentle but thorough cleansing with soap and water, débridement only of damaged tissue and the application of a dry sterile dressing without suture) of Mason and Koch was followed in 82 cases and some variation of the procedure in the remaining 32 cases. There were no infected wounds among the 82 patients, except of 2 whose

wounds over the knuckle were sutured. In 7 of the 14 patients who were treated with phenol and alcohol more evidence of inflammation developed than was usual; wounds became red, swollen and indurated but did not suppurate. Two patients with knuckle injuries which were cleansed and sutured required hospitalization later. The results in the entire group of cases have been gratifying, especially in comparison to former experience with cauterization, excision or extensive cleansing with strong chemical agents. The results confirm the author's belief that cleansing of the wound with soap and water within a few hours after the injury is the method of choice for prophylaxis of human bite infections. By this means the healing time of the wound is shortened and tissue destruction is minimized. In 35 patients the average time for complete healing was seven and eight-tenths days. In 60 other patients healing had progressed sufficiently far in an average time of four and nine-tenths days to warrant discharge. It is a good rule to consider any small penetrating wound on the hand as a human bite until proved otherwise. Bites on the fingers are generally on the distal phalanx. They vary from simple abrasions to compound fractures. Injuries to the lip range from penetrating wounds to almost complete avulsion, the latter being more common. Bites of the nose are usually extensive; they go through the ala severing the cartilage, the severed portion being attached only loosely over the bridge of the nose. After careful cleansing, loose approximation is permissible. — Speirs, R. E. Prevention of Human Bite Infections. Surg. Gyn. & Obs. 72:619 (March) 1941. Via *J.A.M.A.* 116:2724 (June 14) 1941.

Vital Statistics for 1939:—The death rate for the United States registration area in 1939 was 10.6, the lowest ever recorded, according to a final report issued by the U. S. Bureau of the Census. The birth rate declined from 17.6 per thousand of estimated population in 1938 to 17.3 in 1939. There were 2,265,588 births and 1,387,897 deaths reported for the year. Death rates for such causes as heart disease, cancer and diabetes were higher than ever, but those for influenza and pneumonia, for tuberculosis and the infant and maternal mortality rates were the lowest ever reported for the death registration area. Death rates for selected causes showed 43.2 per hundred thousand of population for tuberculosis, 59.4 for pneumonia and 16.4 for influenza. Cancer showed the highest rate for cancer of the digestive organs and peritoneum, 54.9; female genital organs 15.9, breast 11.4 and other forms 35.6. The rate for diabetes was 25.6. Rates for heart disease were: chronic rheumatic diseases of the heart 20.1, diseases of coronary arteries and angina pectoris 68.5, other forms of heart disease 187.6. Nephritis showed a rate of 83.1. The suicide rate was 14.2, which was smaller than that for the preceding four years shown in the table. Motor vehicle accidents gave a rate of 24.8 and other accidents 46.1. A table analyzing causes of death in infants under 1 year of age gave the highest causes as premature birth, 32,251 out of a total of 108,846 infant deaths; pneumonia 13,786; congenital malformations 10,390; injury at birth 10,164; diarrhea, enteritis etc. 9,096; influenza 2,311 and whooping cough 2,013. Of 37,997 deaths due to transportation accidents, 30,468 occurred in automobile accidents; 1,329 in train and automobile accidents and 3,394 in other railway accidents; 1,087 in water transport and 396 in air transport.—*J.A.M.A.* 116:2609 (June 7) 1941.

Periodontia in Internal Medicine:—Miller and Arvins believe that the danger of internal infection from periodontal foci (pus pockets, gingivitis and the like) is much more potent than that from periapical disease. They list the following reasons: 1. A much greater zone is involved than in a periapical abscess, considering the total surface area of the walls of all pockets. At least twenty times the absorption surface is involved in an average case of periodontal disease as in a well developed chronic periapical abscess. 2. Absorption from the gingival crevice is more rapid, as the blood and lymph supply to the gingiva is much greater than to a periapical area in bone, especially when the latter is surrounded by even a slight degree of condensation. Round, Kirkpatrick and Hails have shown that the force of mastication is sufficient to pump bacteria and their toxins into the circulation. 3. Resistance to bacterial growth is lower in the gingival crevice than anywhere else in the oral cavity because of stagnation and food accumulation. The depths of gingival crevices and periodontal pockets offer an ideal incubation zone for strains of streptococci which grow best in a low oxygen environment. Therefore the authors point out that not only should any comprehensive search for foci of infection include roentgen evidence of lesions at the apexes of teeth but the study should encompass the alveolar margin for activity of bone destruction and a thorough clinical examination for gingival disturbances which have not as yet affected the bony structure. The amount of bone loss is not as significant as the type of bone which remains, for this determines the activity of periodontal disease. Periodontal disease is primarily dysfunctional in origin, and the disturbing factors producing a "locus minoris resistentiae" may be broadly grouped as functional, traumatic and systemic (endocrine, allergic and nervous). The pri-

mary therapeutic procedure is the restoration of functional coordination of the teeth so that stress is evenly divided and there is no strain in any excursive movements. In young persons orthodontia may be beneficial, in adults it should always be followed by the shaping of the teeth to conform to the patient's age and functional requirements. Dietary deficiencies or systemic diseases which may be causing or complicating the local disease must be attended to. The direct local requirement of a fibrous, detergent diet is of equal importance to the mineral, vitamin and other dietary requirements for oral health. Pus pockets must be eliminated by surgical gingivectomy, conservative surgery or conservative subgingival curettage. The etiologic factors of periodontal disease are rarely, if ever, single. Periodontal disease can be cured, and the resulting improved health can be maintained.—Miller, S. C. and Arvins, A. N. Periodontia in Internal Medicine. *New York State J. Med.* 41:359 Via *J.A.M.A.* 116:2539 (May 31) 1941.

Tobacco and Mouth Cancer:—The data presented here, although subject to certain limitations because of their clinical character, support the concept that chewing tobacco is an etiologic factor in the development of cancer of the mouth. A study of tobacco chewing, a practice whereby the causative factor is applied to the mucous membrane, is perhaps the most direct method of demonstrating its etiologic relation to cancer. It is agreed by practically all observers that carcinoma of the mouth develops at the point at which the quid is held, and an analysis of the history and observations made in the 8 cases presented here amply corroborates such a view.

The literature on betel chewing reveals further evidence that the practice of chewing tobacco may be the dominant factor in the development of this type of cancer. Tobacco as a common ingredient in the betel chew has received some attention in this regard from others. It is to be noted that reports which fail to show a greater incidence of cancer of the mouth in betel chewers also fail to mention the use of tobacco in describing the preparation of the betel chew. It is unfortunate that details and statistical information on betel chewing and cancer are lacking in regions in which this is a common practice.

The lesions on the inner surface of the cheek associated with the use of chewing tobacco have a distinctive appearance. They are of a papillary verrucoid character, covered and surrounded by patchy areas of leukoplakia. Only moderate induration is present, and deep infiltration into the submucosal tissues is lacking. The leukoplakic changes are probably precursors of the actual neoplasm and represent the earliest changes. This is well illustrated in 2 subjects who transferred the quid from one side of the mouth to the other after the developing lesions became too painful. In both instances, small circumscribed patches of leukoplakia appeared at the new sites. The lesions are slow in growing and metastasize only late in the course of the disease. Histologically the tumors reveal no unusual features. They are all examples of differentiated epidermoid carcinoma.

The therapy which these patients have received has been radiation. Immediate response has been excellent, although large doses were required for complete regression. It is impossible to state the effectiveness of radiation with respect to cure, since these cases have been collected in the past two years. It is important to note, however, that all patients who completed treatment were freed of the primary lesion.—Friedell, H. L. and Rosenthal, L. M. Etiologic Role of Chewing Tobacco in Cancer of the Mouth. *J.A.M.A.* 116:2130 (May 10) 1941.

Arthritis and Oral Infection: — Shuster points out that in recent years the focal infection theory of chronic arthritis has been the target of much criticism. The results of defocalization have not always lived up to expectation, and some workers do not advise dependence on this treatment in such joint conditions. The author believes this view is based on a misconception of the theory. That such treatment deserves an important place in the therapy of chronic infectious arthritis is shown by his results obtained in 785 patients treated by defocalization. Of 468 persons with arthritis for less than six months the teeth of 366 were removed and 150 of these were improved, the tonsils of 78 were removed and 39 were improved, and of the 24 patients who had sinus surgery 3 improved. Of the 317 remaining patients with arthritis for more than two years 43 of 215 were improved following the removal of teeth, 21 of 84 after tonsillectomies and 1 of 18 after their sinuses were drained. These figures indicate the advantage of early focal surgery. The removal of foci in the early cases was approximately twice as effective as in the late stages of the disease. Some of the reasons which may be responsible for the failure of focal surgery are: 1. Not every infected tooth or tonsil is the cause of the focal infection. 2. Secondary foci may be present if the focal infection is of long duration. Thus even if the primary focus is removed infection may still be present in inaccessible areas. Remembering the frequency of secondary foci of infection the surgeon should, if possible, prepare a vaccine from the enucleated focus. 3. Not infrequently the

infected focus is incompletely removed and focal infection continues. When teeth or tonsils are removed, fragments and surrounding infected areas may be left. 4. If the removal of infected foci is postponed too long it can scarcely be expected to effect improvement in terminal stages of the disease. 5. Surgery may activate a walled-off focus, and such incidental trauma may promote the development of secondary foci. The spectacular instances of recovery after focal surgery may blind one to the fact that not all patients are benefited and that some are even harmed. It is not fully realized that trauma to an infected focus may result in dissemination of its bacterial products. Even irritation of a focus may cause a systemic invasion. Bacteremia is often seen after defocalization. Septicemia and subacute bacterial endocarditis occur too frequently to be disregarded. Subacute bacterial endocarditis after defocalization in patients with a history of rheumatic heart disease must always be kept in mind. In spite of such complications the author still believes that except in cases of rheumatic heart disease foci should be removed as early as is compatible with safety. In chronic infectious arthritis surgery should always be delayed in leukopenia, pronounced shift to the left of leukocytes, absence of blood complement and in an acutely infected focus. A short course of streptococcus vaccine reduces the incidence of exacerbations after defocalization. The statement that streptococcus vaccine has failed in the treatment of chronic infectious arthritis should not be accepted before some of the reasons for failure are analyzed. 1. Vaccines are often prepared from noninfecting or nonetiologic foci. 2. The autogenous vaccine prepared often consists only of the predominant strain, and such a strain may be nonpathogenic. 3. Stock streptococcus vaccines have often been employed. Most bacteriologists agree that stock vaccines are no better than nonspecific therapy. 4. Vaccine therapy is sometimes begun too late in the stage of the arthritis when the symptoms are not due to infection but to articular derangement. 5. Dependence should not be placed on vaccine therapy alone: orthopedics, physical therapy, massage and corrective exercises are indicated. 6. Vaccine therapy is often discontinued too soon. 7. Improper dosage is often responsible for poor results. Experience has shown that small doses are effective. The author has used streptococcus vaccine for chronic arthritis for the last sixteen years. It should not be used to the exclusion of other recognized measures, but he feels that even if vaccine therapy does not cure arthritis it at least checks the infection. However, unless infected foci are removed reinfection will frequently occur.—Shuster, M. *Am. J. of Ortho. & Oral Surg.*, 27:149 (March) 1941.

Congenital Syphilis:—An early roentgenographic diagnosis of congenital syphilis on the unerupted permanent central incisors and first molars of a Negro girl aged 4 years was made and confirmed clinically two years later when the teeth had appeared in the oral cavity.

The teeth showed disturbances in the developmental phases which occur during the neonatal period and earliest infancy. The effects were different in the growing deciduous and permanent teeth, depending on the developmental stage active at the time. The deciduous teeth, active in the formation of enamel, showed hypoplasia; the permanent teeth, active in morphodifferentiation, showed a disturbed dentino-enamel junction with a resulting characteristic distortion of the crown.

In addition, the presence of hypoplasia of the enamel in the permanent teeth was probably the record of another systemic disturbance which had been present from about the third to the tenth month.

The conditions of the teeth are permanent and not subject to change as they are in the bones.

Roentgenograms of the unerupted permanent teeth as well as of the long bones should be used as an aid in the early diagnosis of congenital syphilis.—Sarnat, B. G., Schour, Isaac and Heupel, Robert. Roentgenographic Diagnosis of Congenital Syphilis. *J.A.M.A.* 116:2745 (June 21) 1941.

Sulfanilamide in Dentistry:—According to Sinclair, sulfanilamides have been employed in cellulitis, acute osteomyelitis and infected compound fractures. Acute necrotic gingivitis (Vincent's infection) does not respond well to sulfanilamide, and its use in chronic osteomyelitis is questionable. His clinical observations on the local use of sulfanilamide during the last three years following all extractions and operations justify their continued use. No local toxic effect has been encountered. Roentgenograms of sockets thus treated show a normal filling in of bone substance. Swelling or fever has not been observed following extraction of teeth. Healing during this therapy has been normal. Sulfanilamide will not prevent autolysis of the blood clot (dry socket) when excessive trauma has been produced during extraction of teeth with roots embedded in a sclerosed area of bone. Interosseous circulation is scanty in this area, if present at all. Sulfanilamide is unable to prevent the "dry socket" under this condition, but it does prevent pain and hastens healing by controlling infection. Such lesions are similar to compound fractures after they have been reduced.

So far the author has not observed any drug incompatible with sulfanilamide when both are used locally. Sulfanilamide placed in the socket of a recently extracted tooth does not cause a true in vivo or in vitro state, but it is nearer the in vitro condition. There is no circulation within the area until granulation begins, although there is a migration of leukocytes and serum seepage into the area. Because of the noncirculatory status of the area, the value of systemic administration is questionable. The placing of a part of a tablet into the socket enables it to take up its maximal concentration of sulfanilamide. This maximal saturation is maintained by the excess chemical. This is also true of a compound fracture or of osteomyelitis. Sulfapyridine has not been found superior to sulfanilamide, and the author has discontinued its use.—Sinclair, J. A. Clinical Observations on Local Use of Sulfanilamide in Dentistry. N. Carolina Med. J. 1:579 (Nov.) 1940. Via *J.A.M.A.* 116:254 (Jan. 18) 1941.

Dental Caries in London Children:—Allen studied the effect of nutrition on the dental caries of 120 children from 5 to 7 years of age. The average caries figures and the nutrition indexes were calculated at the first inspection and again at the end of one year. There was a fairly high negative correlation at the age of 5 between the increase in the average caries figure and the increase in the nutrition figure; that is, the greater the increase in the nutrition index (indicative of improvement in nutrition) the less the increase in caries. At 6 years of age the same relation existed. At 7 years no correlation was found between the two conditions, but this group is not so satisfactory because many of the deciduous teeth were already normally shed. No association existed between the amount of caries found at the first inspection and that at the second inspection except that the onset and spread of caries tended to be less when the nutrition was better. Studies in animals show that good dental structure can be produced by dietary methods, and the same is true for children. Posteruptive influences, though less strong, appear to provide secondary protection. Vitamin additions to the diet before eruption of the teeth had a definitely beneficial effect in reducing the amount of decay which developed, and also even after full eruption the additions tended to delay the onset and spread of caries in the permanent teeth. Among the 120 elementary school children the lower incisors and canines showed the best surface structure and the molars the worst, the upper incisors and canines being intermediate; the structurally soundest teeth were those of which the greatest part is formed in utero before dietary deficiencies are normally felt by the child. There was a definite association between the quality of the structure of the teeth and the amount of caries present: the better the structure, the greater the resistance to dental disease. An improvement in physical condition as judged by better nutrition index at 5 and 6 years of age was associated with a smaller increase in dental caries.—Allen, Irene. Survey of Nutrition and Dental Caries in 120 London Elementary School Children. Brit. Med. J. 1:44 (Jan. 11) 1941. Via *J.A.M.A.* 116:1989 (April 26) 1941.

Fluorine and Dental Caries:—According to Wilson, records of 1,048 Somerset children from 5 to 16 years of age submitted to a statistical study indicate that the change in altered enamel caused by dental fluorosis is one factor preventing the breakdown in structure giving rise to dental caries. Of 122 children with no caries 66 had dental fluorosis, of 130 with one carious tooth the enamel of 28 was mottled, and the figures for 181 with two, 173 with three, 147 with four and 295 with five or more carious teeth were respectively 27, 12, 11 and 11. Thus an increased intake of fluorine before the completion of calcification appears to be associated with a relative immunity to caries. The loss of fluorine by the substitution of a highly milled and demineralized flour among communities formerly using coarsely ground cereal may have a bearing on the spread of dental caries among such peoples. With regard to the durability of mottled teeth, the author found that in England pyorrhea was common among men and women in the poorer rural communities irrespective of the presence of fluorine. When associated with mottled enamel the teeth that loosened were often not decayed. Among 90 rural housewives in Oxfordshire from 21 to 45 years of age, 19 had false teeth and 13 who showed mottled enamel had but a few carious teeth, while the remaining 58 gave no evidence of dental fluorosis but showed a considerable amount of decay.—Wilson, D. C. Fluorine and Dental Caries. Lancet (London) 1:375 (March 22) 1941. Via *J.A.M.A.* 117: 149 (July 12) 1941.

Bubble Gum:—In the first case to be reported of cheilitis due to hypersensitivity to the vapors of the oil of cinnamon present in bubble gum, the eruption was limited solely to the lips. Hypersensitivity was demonstrated by the patch test and by the fume test. Complete amelioration of symptoms followed avoidance of the oil of cinnamon.—Miller, Jerome. Cheilitis from Sensitivity to Oil of Cinnamon Present in Bubble Gum. *J.A.M.A.* 116:131 (Jan. 11) 1941.

THE CONTEMPORARY SCENE

A phenomenon of recent publishing history has been the undiminishing popularity of books by and about physicians. *An American Doctor's Odyssey* was a fascinating account of public health medicine in the far-away corners of the world. *The Horse and Buggy Doctor* was a charming portrait of an American tradition: the country doctor. This book, incidentally, started a mild tradition of its own for, shortly after its appearance, it was followed by *Country Lawyer, Country Editor, Country Vet.* Most inappropriately, there has yet been no book called *Country Farmer* and who is to say that that personage does not take a very important place in the rural scene.

When it was thought that this phenomenon had run its course and faded away into Sunday-supplement accounts by gynecologists, psychiatrists and obstetricians, along came one of the best of the series, Hans Zinsser's *As I Remember Him.* This is a strange book and a fascinating one. It was written by the great bacteriologist as though it were the account of someone else's life. This device, of course, was transparent almost at once but it did allow the author to comment somewhat objectively on Zinsser as he saw him in this new dimension.

FOREBODING

There is a tragic story connected with Zinsser's book. It was written by him shortly after he learned that he was afflicted with one of the fatal blood diseases. Not three months after the book was published, Zinsser was dead. One would expect to find, therefore, a solemn account touched with forebodings of death. There is none of that. It is a lusty story of a man who was superbly trained for his work and in it made superb achievements. Through it all runs an appreciation of the things that make life pungent and satisfying: hard work, travel, books, music and friends. Zinsser had his opinions (on almost every subject under the sun) and they were always stimulating and interesting even though few would always agree with them.

Before Zinsser's book, of course, came Carrel's *Man, The Unknown.* Written by an equally great scientist in the medical field, it was almost the opposite of *As I Remember Him.* Carrel, who in collaboration with Charles Lindbergh had just received world-wide publicity for the invention of the "mechanical heart," devoted very little space to the practical details of the work carried on by him in his laboratory. Instead he wrote an almost mystic treatise on the higher functions of the body. Why it achieved the astonishing popularity it did is something that escapes many critics, particularly when it is noted that the book was not easy reading.

DR. KILDARE

Even in the field of fiction this popular interest in medical practice continued. Cronin's *The Citadel* was an indictment of the English and Scottish health insurance systems and the story was compelling in both the book and the motion picture. Perhaps this cycle began to approach its end with the appearance of the manly Dr. Kildare and his hiccoughing senior in the movies. Dr. Kildare has had more adventures (under the tutelage of that famous surgeon, Lionel Barrymore) than a dive bomber pilot. Even today the marquee of many a motion picture palace informs the public in bright lights that Dr. Kildare walks hospital corridors again. It is not unlikely that the coming generation will discuss the Kildare episodes as the present one talks about *The Perils of Pauline.*

It was inevitable, as we started out to say almost at the beginning of this article, that the flood of books about physicians would eventually produce a similar attempt by a dentist. If the average reader could retain an unflagging interest after so many colicky babies, epidemics, home remedies, and desperate surgical interventions had been inflicted upon him, it is not unlikely that he would read a book on dental adventures. Such a book has now been written and published.[1] It should be as welcome to the average reader as a mint tablet after a heavy meal.

Will Frackelton is a dentist who practiced in the West when it was more than a place for dude ranches and power reclamation projects. At one time in his career he announced himself as a "graduate of the American College of Dental Surgery, Chicago Postgraduate School, Licentiate of the states of Wisconsin and Illinois, and formerly House Dentist to the Wisconsin State Industrial School."

SAGE BRUSH DENTIST

Sagebrush Dentist is a very breezy account of Frackelton's adventures not only as a dentist but as a pugilist of some skill, as an expert marksman and as a man with a deep familiarity with the frontier saloon and its chief stock in trade. The adventures range from setting a brace of diamonds in Poker Nell's incisors to getting a promise from President Taft not to disband the garrison at Fort Mackenzie. In between are accounts of frontier ladies, vigilantes, cowboys, Indians and other decor of the early West.

Frackelton spins a tall yarn as the following one from the book discloses.

> One young woman came to my office with nine of her front teeth knocked out. With her came the missing teeth wrapped in a pocket handkerchief. I sterilized her mouth as thoroughly as possible and cleaned the teeth, wired them to a spectacles bow—the only thing available—and put them back in position. Twenty years later the patient called to see me. Her teeth, although slightly discolored, were still doing service, with no sign of infection anywhere.

And if you believe that one, the author is ready to tell you taller ones.

The practice of dentistry in the old West was no job for a tender-skinned individual, neither was it carried on with luxurious equipment. Frackelton writes:

> In comparison with that of today, my office equipment was pretty crude. An S. S. White foot engine did service at the chair for drilling or polishing teeth, and when it came to plates and sets, we old-time dentists handled our own laboratory product, from the impression of the mouth to the finished product.
>
> The vulcanizer was heated by kerosene, and in place of the present-day electric lathe, there was a big iron foot wheel and lathe to hold the felt wheels and brushes. I still have some of the old foot power equipment in my office just as a souvenir to show the younger dentists—and in case the current should go out.

NO DISTINCTION

For some readers the almost complete lack of literary distinction in *Sagebrush Dentist* will be made up by the riproaring pace of some of the author's adventures. Others will find the style a little artificial and much too determined to reveal all of the hair on its chest. *Sagebrush Dentist* is a long way from the more accomplished memoirs of the medical practitioners since it deals almost entirely with physical, rather than mental, adventures. Still, as a picture of earlier dental practice in a lustier day, *Sagebrush Dentist* is worth taking out to the hammock when the day's headlines have made one very, very weary with the present day world.—*h.*

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[1] Sagebrush Dentist. As Told by Will Frackelton to Herman Gastrell Seeley. Pp. 246. Price, $2.50. Chicago: A. C. McClurg & Co. 1941.

SO-CALLED "INTRA-FOLLICULAR CARIES"

(Continued from page 308)

lying soft tissue, although the clinical findings do not admit this. Such an inflammation might have been the stimulus. However, none of this overlying tissue was procured and consequently its condition is unknown.

Subsequent instances of this kind perhaps should be studied from the standpoint of vitamin and endocrine disturbances as well as from the histological viewpoint. If these cases are all alike it might be that they are analagous to the situation reported by Mueller and Roney[2] in which a systemic condition apparently played a role differing, however, in manner of approach.—*311 East Chicago Avenue, Chicago.*

FILLING MATERIALS FOR DECIDUOUS TEETH

(Continued from page 310)

short period of usage. Silver amalgam is the ideal filling material for both deciduous and permanent teeth in cavities where it can be properly condensed, such as those on occlusal, buccal or lingual surfaces.

Inlays

Inlays:—Most compound cavities can be restored better with a cast restoration. Occlusal cavities involving the cusps can be restored better with a casting than with a plastic filling material. In deciduous molar teeth that have to be retained for a period of two years or longer, a cast filling of either gold or silver will better preserve the tooth with less chance of later replacement than any other type of restoration. Where a lack of appreciation and dental information prevents the usage of gold in deciduous teeth, an alloy of 80 per cent silver and 20 per cent copper may be used. This will make a serviceable casting that will remain in place until the tooth is shed. The distal surface of the second deciduous molar tooth should always be restored with a casting so that the first permanent molar may contact a well-polished surface and minimize the danger of caries occurring on the permanent tooth's mesial surface. This surface is one of the most vulnerable surfaces and most difficult to keep free from decay.

Gold foil:—Gold foil may be used in occlusal, buccal or lingual surfaces of the permanent posterior teeth and proximal, labial or lingual surfaces of anterior permanent teeth. Because of the constant eruption and shifting of position of teeth in childhood, the higher degree of caries susceptibilty and a not too efficient program of mouth hygiene, this splendid work often results in failure. It is often wiser to delay this more permanent program until these obstacles have been eliminated.

Summary

The factors that enter into the selection of a filling material for the deciduous teeth are given. Various types of filling materials are examined with particular reference to their use in specific cavities occurring in the first dentition.—*636 Church Street, Evanston.*

[2]Laboratory Studies of an Unusual Case of Resorption. J.A.D.A. 17:326, 1930.

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DIRECTORY OF COMPONENT SOCIETIES

Society	President	Secretary	Chairman Dental Health Education	Meetings
G. V. Black	D. E. Doolen *Lincoln*	John Hatcher *Springfield*	Ross Bradley *Jacksonville*	2nd Thursday in each month except July, August and September.
Champaign-Danville	C. F. Haussermann *Champaign*	G. W. Akerly *Milford*	G. C. McCann *Danville*	3rd Thursday of March and October.
Chicago	G. E. Cartwright *30 N. Michigan* *Chicago*	Harold W. Oppice *30 N. Michigan* *Chicago*	E. D. Coolidge *30 N. Michigan* *Chicago*	3rd Tuesday of each month except June, July, August and January.
Decatur	Wray Monroe *Decatur*	T. J. Campbell *Decatur*	P. B. Berryhill *Decatur*	2nd Tuesday of each month except May, June, July and August.
Eastern Illinois	H. A. Baughman *Mattoon*	J. A. Philips *Arcola*	G. L. Kennedy *Villa Grove*	April and September.
Fox River Valley	R. G. Nicholson *Aurora*	J. M. Adams *Marengo*	L. C. Blackman *Elgin*	3rd Wednesday in each month.
T. L. Gilmer	T. J. Ownby *Mendon*	Leroy M. Wolfe *Quincy*	H. M. Tarpley *Quincy*	1st Tuesday and Wednesday in November.
Kankakee	J. A. Zwisler *Kankakee*	W. J. Cunningham *Kankakee*	M. L. Baker *Kankakee*	3rd Thursday in March and September.
Knox	Walter Pacey *Galesburg*	R. M. Way *Galesburg*	M. W. Olson *Galesburg*	1st Thursday in each month except June, July and August.
La Salle	A. L. Roberts *Streator*	V. J. Piscitelle *LaSalle*	W. G. Metcalf *Streator*	April and October.
McLean	A. A. Johnson *Minonk*	Carl L. Green *Bloomington*	T. A. Rost *Bloomington*	1st Monday in each month, October to April inclusive.
Madison	R. E. Hopkins *Alton*	G. A. Smith *Alton*	E. T. Gallagher *Alton*	February and October.
Northwest	C. L. Snyder *Freeport*	Peter Griffo *Freeport*	C. L. Snyder *Freeport*	2nd Monday of each month, September to May.
Peoria	C. B. Clarno *Peoria*	W. H. Hartz *Peoria*	P. W. Clopper *Peoria*	1st Monday of each month except July, August and September.
Rock Island	C. M. Rile *Rock Island*	J. A. S. Nelson *Moline*	F. M. Helpenstell *Rock Island*	3rd Tuesday in each month, September to May inclusive.
St. Clair	J. L. Arns *Columbia*	R. A. Hundley *East St. Louis*	J. W. Smith *Belleville*	3rd Thursday in January.
Southern Illinois	H. M. Fry *Sesser*	W. G. McCall *Metropolis*	W. E. Wagner *Ava*	Semi-annual—March and October.
Wabash River	C. L. Jordan *Olney*	H. W. Kinney *Robinson*	E. N. Henderson *Albion*	Annual — Second Wednesday in October.
Warren	H. W. Stott *Monmouth*	E. B. Knights *Monmouth*	H. W. McMillan *Roseville*	4th Monday of each month except June, July and August.
Whiteside-Lee	R. E. Worsley *Dixon*	C. E. Smith *Dixon*	Z. W. Moss *Dixon*	Every two months—around the 15th.
Will-Grundy	E. A. Dainko *Joliet*	J. W. Zelko *Joliet*	A. C. Eckman *Joliet*	2nd Thursday in January, March, May, September, November and December.
Winnebago	W. M. Magnelia *Rockford*	E. B. Morris *Rockford*	C. D. Reed *Rockford*	2nd Wednesday in each month except June, July, August and September.

Hotels for Houston

American Dental Association
October 27-31, 1941

HOTEL	Single	Double	Twin
Auditorium, 701 Texas	$2.50-$3-$3.50	$3.50-$4.50-$5.50	$5
Belmont, 1308 Clay	$2	$3-$3.50	
Brazos, 608 Preston	$2.50	$4	$4
Bristol, 712 Travis	$2.50-$3-$3.50	$3.50-$4-$5	$4
Cotton, Rusk and Fannin	$2-$2.50-$3	$3-$3.50-$4.50	$4
De George, 1418 Preston	$2	$3-$3.50	$4.50-$5.50
Freds Hotel, 1006 Dallas	$1.50-$2	$2-$3	$2.50
Sam Houston, 1115 Prairie	$2.50-$3-$3.50	$4-$5-$6	$5-$6
Hamford Apartments, 919 Dallas	$1.50-$2	$2-$2.50	
Houston Club, Commerce Building	$4-$5-$6	$6-$7-$8	
Lamar, Main and Lamar	$3-$4-$5-$6	$5-$6-$8-$9	$5-$7-$8-$9
Lamar Annex Hotel, 916 McKinney	$2.50-$3-$4	$4-$4.50-$5-$6	$5-$6
Lee, 1114 Polk	$2	$2.50-$3	$3
Macatee, 519 Washington	$2-$3-$3.50	$3-$4-$5	$4-$5
Ben Milam, 1521 Texas	$2.50-$3-$3.50	$3.50-$4-$4.50	$6
Milby, 902 Texas	$2-$2.50-$3	$3-$3.50-$4	$4-$4.50-$5
Oxford, 811 Lamar	$2	$3-$4	
Park, 610 Louisiana	$1.50	$2-$2.50	$3
William Penn, 1423 Texas	$2-$2.50-$3-$4	$3-$3.50-$4.50-$5-$5.50	$6
Plaza, 5020 Montrose	$3-$3.50-$4-$5	$4.50-$5-$6-$7	$6-$7
Rhodes Apartment, 611 La Branch	$2	$2.50-$3	
Rice (Headquarters), Main and Texas	$3-$4-$4.50-$5	$5-$6-$6.50-$7-$8	$6-$7-$8-$9
Roosevelt, 1111 Clay	$2	$2.50-$3	
Rossonian Apartment, 919 Fannin			
San Jacinto, 820 Main	$2.50-$3-$3.50	$4-$4.50-$5-$5.50	$5.50-$6-$7-$8
Stratford, 414 Fannin	$2-$2.50-$3	$3.50-$4-$4.50	$4-$4.50
Tennison, 801 Washington	$2	$3	$3.50
Texas State, 720 Fannin	$3-$4-$5-$6	$5-$6-$7-$8	$6-$7-$8-$9-$10
Travelers, 114 Main	$1.50-$2	$2-$3	
Walee, 1010 Caroline	$2	$2.50-$3	
Warwick, 5701 Main	$3.50-$5	$3.50-$5	$5-$6
Woodrow, 1412 Fannin	$2-$2.50	$3-$4-$5	

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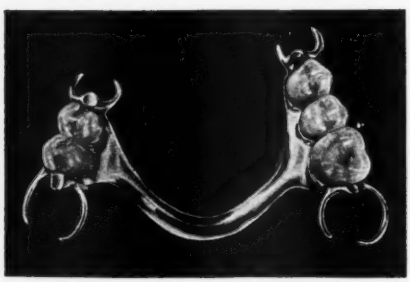

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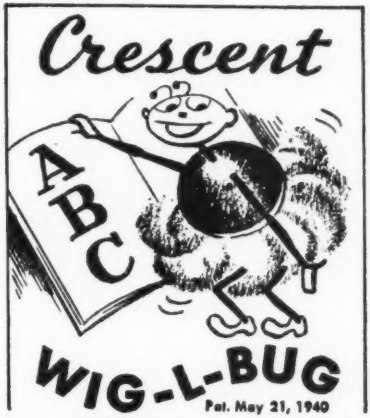

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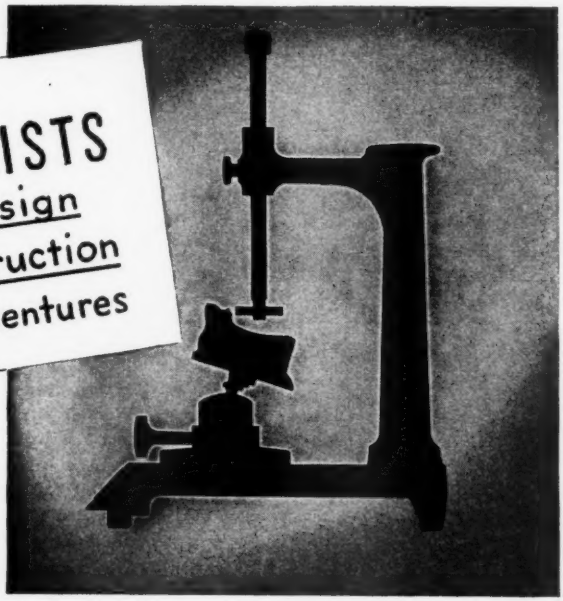

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